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ADDRESS.

INTRODUCTORY ADDRESS.

Read in the Section on Neurology and Medical Jurisprudence, at the Forty-seventh Annual Meeting of the American Medical Association, held at Atlanta, Ga., May 5-8, 1896.

BY T. D. CROTHERS, M.D., CHAIRMAN.
HARTFORD, CONN.

This Section of Neurology and Medical Jurisprudence has reached a position in the department of medicine of intense practical interest.

Every practitioner is confronted with questions of neurology, and the legal relations and possibilities which are constantly springing out of the present conditions. Nerve strains and drains, and vast complex states of neurosis are increasing yearly. Half a dozen text-books and a score or more of pamphlets, and monographs have been published in English during the past year, exclusively on nerve diseases.

This is only a small part of the literature which is appearing in journals devoted to this specialty, and in society reports and general journals of medicine.

The topic of medical jurisprudence has been enriched with at least four encyclopedic volumes, and over a dozen separate works and almost innumerable papers, lectures, essays, reports of cases, and the renewed activity in the many societies devoted to this special study. Literally a new field of medicine is coming into prominence.

To the average practitioner there is something appalling in the significance of these topics. That is their magnitude and intricate relations to the every day practice, create a feeling of despair in being able to understand and apply the facts which are becoming so numerous.

In neurology the impression has been fostered, that only specialists with laboratory experience and facilities for accurate measurement and tests of the nervous system are able to judge wisely of these cases. This is wrong. Neurology is a general topic, to be studied by both the specialist and general practitioner.

The specialist with his means and appliances for exact scrutiny of the phenomena of nerve disorders, approaches it from one side; the practitioner with his observation of symptoms, and comparative study and grouping, from the other. Both may reach conclusions in harmony or differing widely, or both be in error.

Not unfrequently the specialists will make a diagnosis based on the readings of instruments of precision, and mechanical studies of phenomena of nerve action, that is not confirmed by the subsequent history. The general practitioner, will study the symptoms of the same case, and make a correct diagnosis from a comparison and study of appearances. This indicates that laboratory training and researches are not the absolute essentials for skill in diagnosis of nerve diseases.

I think the great demand in medical training to-day is to teach how to observe accurately, and how to estimate and compare the results of observation. In nervous diseases more than in other branches the symptoms point to some local or general lesion and it is the meaning of these "distress signals" that will enable us to understand the disorder present. The mapping of certain symptoms and the reasoning of their meaning is simple enough, but their verification from repeated studies and confirmation by time and events is the final test. I think neurology and jurisprudence require more accurate observation of symptoms, and a higher degree of analytic skill and judgment than in any other problems of disease. Instruments of precision and laboratory researches are limited, but the approach from the clinical side, tracing back objective and subjective symptoms to their first causes, requires the highest type of pure reasoning and judgment. Neurology carries us beyond the boundaries of gross material life.

The defects of nerve and nerve fibers and their relation to each other, are practically a very small part of the subject. The realm of the psychical is still an unknown continent, and yet its laws and forces appear in every case that calls for treatment. Preventive medicine, the germ theories, the mysteries of chemic physiology, and all the vast range of "new lands" which are opening up before the student, are insignificant compared with the unknown power of mind, brain force and what is called nerve energy. No one can plead incapacity to work in this field. Its facts are everywhere open to observation.

Every person carries in his individual mental life mysteries, the solution of which is of the highest importance to the race. The mental and nervous element in disease, in injury, in surgical operations, the changes of mind and its influence over the body, the meaning of the phenomena of hysteria, and the terms neurasthenia and the constantly increasing names of symptoms of brain failures, are all "polar regions of mystery." We are confronted with the fact, that the present treatment of crime, insanity and drug manias by legal methods has not kept pace with the march of science. That the densest superstition prevails in the practice of the courts, and medical men are called on to harmonize the errors of the past with the teachings of the present. Who will wonder that expert testimony of this character will fail, and fall into disrepute. The jurisprudence of to-day can not be a modern edition of past medical theories and teachings of science. It must be founded on new facts of mind and matter, new discoveries of the relations to environment and human life, and the new physiology and psychology of the brain. Every year our relations become more and more complex. The demands for new adjustments of life and living call for new energies and create new sources of exhaustion. The brain and nervous system falters and retrogrades and the legal relations change. Out of harmony with the environment

clashing with existing conditions requires a new jurisprudence and new conceptions of responsibility and duty. Neurology is no longer the field of the specialist; it belongs to general medicine, to the country and village physician, to the city practitioner, and comes into the realm of every student of medicine.

Jurisprudence is equally broad in its requirements and application to every day life. If you will study the program of the several Sections you will notice how intimately neurology has become associated with the ever varying topics of medicine. If you will turn to your individual experiences and present conditions, and inquire of the mental phenomena, which is ever pressing for solution, some conception of the subject will dawn upon you. The study of the mental phenomena of neurology promises more startling discoveries than in any other field. The time has come for every student of medicine to assist in clearing up this realm of mystery and superstition. The quackery, humbug and delusions which infest these unknown phenomena of mind and matter will pass away. When neurology comes into general science, when jurisprudence become an exact study founded on certain definite facts, then the injustice and odium of the present will pass away. Our individual duty is to note and examine the phenomena of mentality and the various states of brain and nerve action and seek to discover laws which control them, and the causes and conditions which govern their origin and progress. The one central fact should never be forgotten, viz.: All nerve phenomena, and brain activities are the operation and manifestation of fixed and definite laws, whose movements are as exact and uniform as the stars above us.

In this confusing whirl of brain and nerve force, there is no accident or chance. All normal and abnormal manifestations spring from definite causes which may be known and anticipated. It would be reckless to deny the possibility of stamping out nerve and brain diseases in the future with the same certainty that the germ diseases are prevented. It is simply a question of knowledge of the facts which is the highest province of science to point out.

ORIGINAL ARTICLES.

THE BEST METHOD OF TEACHING GYNECOLOGY.

BY DENSLOW LEWIS, M.D.

PROFESSOR OF GYNECOLOGY IN THE CHICAGO POLICLINIC; ATTENDING GYNECOLOGIST AND OBSTETRICIAN TO THE COOK COUNTY HOSPITAL, CHICAGO.

At the last meeting of the AMERICAN MEDICAL ASSOCIATION there was some discussion relative to the best method of teaching the different branches of medical science. If this subject received attention, as far as gynecology is concerned, I have yet to see a report of what was said. I believe, however, that the usual method of teaching this comparatively new and certainly very important department of medicine fails of its purpose in many instances.

The primary object of a medical education is to train the faculties of observation and then to teach the application of peculiar knowledge for the alleviation of distressing symptoms and the relief of the responsible pathologic conditions. The task is most complicated, and it is not surprising that in many instances the student, who, perhaps, has passed a brilliant examination, fails ignominiously when confronted with the exigencies of actual practice.

Perhaps the fault is not exclusively his. Perhaps the medical education he has received, while teaching him many facts, has not taught him how to apply them. Perhaps, in the attempt to teach all that is known, too little effort has been taken to teach how to make use of knowledge. Too often it is forgotten that the science of medicine finds expression only in the application of the art.

Gynecology has been defined by Sænger as the surgery of the female genitalia. It is, however, much more than this. It includes a knowledge of venereal diseases; it must take into consideration diseases of the bladder, ureter, kidneys and rectum; as a matter of fact it often comprises all operations within the pelvic and abdominal cavities, and for its proper understanding the principles of obstetrics must have been mastered.

Before commencing the study of this extensive and important department of medical science it is obvious much preliminary work must be done. Anatomy, physiology, bacteriology, pathology, uranalysis, venereal diseases, obstetrics and general surgery must first be studied in detail. To minds thus fortified by a definite knowledge of medical facts, trained to processes of analysis and capable of logical reasoning so that sensible deductions may be made from true premises, the teacher of gynecology must endeavor to appeal so that the student having eyes may see, having knowledge may understand, and having common sense may appreciate at its true value what he sees and understands. He should not only be taught what to do but why he does it. The teacher, being necessarily a man of experience (otherwise he should not presume to teach) will have favorite methods which he will advocate. He should not, however, fail to remember that his individual methods are only of value if the reasons which induce him to resort to them are sufficiently apparent to demonstrate their superiority. His duty to the student is to explain *all* well recognized methods of procedure and to compare their value not alone in connection with the case under consideration, but in reference to other similar cases as well.

Text-books at best can give but a general idea of gynecology. I do not condemn their use. On the contrary I believe the systematic study of some manual to be advantageous. It teaches what to expect and, in the hands of an expert quiz-master, such a book unquestionably aids in the acquisition of indispensable facts. The peculiar tasks of the teacher of clinical gynecolgy can not be supplanted by any book or by any system of recitation. The Frœbel method of instruction is particularly necessary in imparting a knowledge of gynecology. Manual training is here indispensable. During his student days the medical man must be taught to see what there is to be seen and to perfect his sense of touch. Otherwise his teaching is superficial, his knowledge imperfect, and as a rule the result of his practice most deplorable.

To explain what I consider to be the best method of teaching gynecology it is perhaps preferable to refer to hypothetic cases. The women who serve me as subjects for clinical instruction are either ambulatory patients, able to be up and about, often able to work, or bed-ridden patients, incapacitated in consequence of some acute or chronic indisposition, often of a serious character.

Let us suppose that a patient presents herself at the dispensary. My second assistant writes out her history in full in accordance with specially prepared blanks which are designed to show a complete statement of important facts in the fewest possible words. The nurse then places the patient upon the operating table in the dorsal position with a sheet covering the legs and genitals. A curtain suspended from the ceiling falls about the patient's waist as she lies upon the table and separates her from the students so that her face is not seen. I first refer to the history of the case. The patient, for example, may have had three children, the youngest being now 2 years old. Her last labor may have been protacted, necessitating the application of forceps. The birth of this child was followed, we will suppose, by an illness that kept the patient in bed for six weeks and was accompanied by fever. Since that time the patient has never been well. She has suffered from pelvic pains varying in degree but usually more severe during menstruation. She has become anemic and weak. She is constipated and notices a constant leucorrhea. Such a history, variously modified by individual circumstances, is a commen record of many dispensary cases.

I introduce the right index finger and notice a laceration of perineum and cervix. With the fingers of the left hand placed on the abdomen over the symphysis the uterus is recognized as somewhat larger than normal, freely movable and not specially sensitive to touch. As the bivalve speculum is introduced the existence of a leucorrheal discharge is observed.

Now what shall the teacher do under these circumstances? He has an opportunity of doing and saying a number of things, all eminently proper and all of value. Having recited the history of the case and having made a cursory examination of the patient, he may now deliver a didactic lecture on one or more features that suggest themselves to him, and in that manner occupy all the time at his disposal. It must be acknowledged that such a procedure is useful; and that the presence of the patient, even if no one touches her, serves to forcibly direct attention to her condition. I confess I often show in the amphitheater women who have recovered from placenta previa, postpartum hemorrhage or eclampsia, and I am confident their presence lends interest to any remarks that are made concerning the case. In a case like the one we are supposed to have before us such a procedure is, in my judgment, not the best method of teaching. In place, therefore, of delivering a lecture on traumatisms of parturition, subinvolution, puerperal infection, endometritis or any other subject which might very aptly be discussed in this connection, the teacher will realize that his chief object is to point out what there is actually to see, and to instruct the student in the proper method of determining what is to be done. His efforts will be directed toward conveying definite knowledge, but he will chiefly endeavor, by emphasizing important facts, by referring to points of similarity and difference due to anatomic conditions and etiologic factors, to train the student to view the matter under consideration in all its relationships, more especially in reference to actual diagnosis and treatment. The teacher must, moreover, understand that he fails in his efforts if he tries to teach too much. In considering ordinary cases he must necessarily repeat much that he has already said. This is desirable rather than objectionable, but he should be able to present the same facts, from different standpoints, so that his remarks are always of sufficient interest to command the attention of the student.

In the case under consideration the teacher will point out the bi-lateral laceration of the cervix. By means of tenacula he will demonstrate how the cervix should be after trachelorraphy. He will explain where incisions should be made, and speak of the "plug of cicatricial tissue," which is often a bug-bear to many students, and he will show where sutures should be passed after proper denudation of the laceration. Each student in turn sees the pathologic condition present. Each student sees the appearance of the laceration as it exists, and also as it should appear when repaired. Several of them take the tenacula in hand and demonstrate the necessary operative procedures.

While the students are thus engaged the teacher may refer to the hypertrophic changes that occur in consequence of cervical laceration. He may speak of the increased danger of infection at the time of labor in consequence of traumatism, and may mention how infection may extend by continuity of mucous surface through uterus and tubes, or through the placental site. He may show how a laceration can extend beyond the cervix even into the peritoneal cavity, and may call attention to the possibility of serious hemorrhage arising from such a laceration during labor and being mistaken for postpartum hemorrhnge due to imperfect uterine contraction; he may explain the necessity of immediate operation in such an event.

He may also explain Dührssen's method of cervical incision in cases requiring immediate delivery, and he can point out how dangerous rupture into the peritoneal cavity is prevented by multiple incisions which obliterate the portio vaginalis. Incidentally he refers to more extensive lacerations of the cervix—the stellate lacerations—which may be practically inoperable and may necessitate an amputation of the cervix, and with the tenacula he demonstrates the operation of Schröder and others.

The patient is now placed in the left lateral position and a Sims' speculum is introduced. The wonderful perspicacity of our first master in gynecology is referred to and the advantages of his position and his speculum are pointed out. Emmet's discovery and operation are spoken of and the steps of the trachelorrhaphy are again demonstrated by other students taking the tenacula in hand. In connection with this demonstration the teacher may consistently speak of the dangers of undue traction in operative efforts on the uterus, or in the course of the examination. Howard Kelly's "third hand" may be mentioned and the possibility of separating adhesions, rupturing a peritoneal abscess or forcing pus from a pyosalpinx upon the peritoneum may be explained.

The speculum is now withdrawn, the patient is again placed in the dorsal decubitus and we proceed to the digital and bi-manual examination. While doing this it may be well to explain the inadvisability of using the uterine sound in most cases. The possibilities of exact diagnosis by other methods, the danger of infection and traumatism, and above all the relatively insignificant character of the knowledge that will be gained in ordinary cases by intra-uterine exploration will deter us from resorting to the use of the sound without preliminary disinfection and dilatation in special cases where intra-uterine exploration is clearly indicated, that is, when the benefits to be derived from this method of examination are plainly evident.

As the vulva is now examined by separating the labia a slight perineal laceration will be observed. Attention is called to the fact that the closure of this laceration has resulted in cicatricial tissue, very different in appearance from the vaginal mucous membrane. The ordinary appearance of the virgin vulva and the vulva in the nullipara is demonstrated by bringing the parts together with the fingers or tenacula. The gaping of the vulva with perhaps slight cystocele or rectocele is pointed out and the possibility of extreme degrees of these conditions is demonstrated by inserting a male sound into the bladder and the finger into the rectum. The remains of the hymen are shown and various matters of medico-legal importance are discussed.

As the examining finger is now introduced reference is made to the difference in sensation as observed in virgins, nulliparæ and in women who have borne children. The absence of a perineum pressing against the anterior vaginal wall is commented on. The sensation of a lacerated cervix, somewhat hypertrophied is mentioned. With the examining finger still in the vagina, the fingers of the other hand are placed over the symphysis and the uterus and its adnexa are palpated. Attention is called to the fact that the fundus uteri is usually felt just over the symphysis, and not over the region of the umbilicus. The student is also impressed with the fact that the finger in the vagina is intended simply to steady the uterus, and that extreme pressure upward is painful as well as useless.

Matters of interest in relation to the uterus are mentioned. The mobility, size, position and degree of tenderness are referred to. The student is taught first to recognize the fundus uteri, and after carefully but gently palpating the uterus he is instructed to pass the examining finger in the vagina to one side of the cervix, while the fingers of the other hand upon the fundus are carried outward so that abnormalities of tube or ovary may be appreciated. Each student in turn now examines the patient under the immediate personal supervision of the teacher. It is surprising how varied are the difficulties experienced by different students, and how quickly a little individual assistance will enable the student to successfully palpate the pelvic organs.

It must be remembered that many practitioners of great experience have never attempted a gynecologic diagnosis. They have vague ideas of the use of the uterine probe and sound, they consider the adjustment of suitable pessaries a matter of special skill, and they attach undue importance to the variations in the positions of the uterus. The possibility of mapping out the pelvic organs by bi-manual palpation is not seriously considered. The importance of recognizing the changes due to inflammation and the relative value of different pathologic conditions due primarily to infection is not fully appreciated.

While the student is being taught to palpate the pelvic organs he is shown normal and abnormal specimens of the female genitalia. He observes, for instance, the size of the tube in a normal specimen, and also in a case of salpingitis or pyosalpinx. As he looks at these specimens he realizes the condition of the tubes in the woman he is examining, and I believe his impressions of the condition of the patient are rendered more vivid and more exact by observing the specimens at this time.

The remarks of the teacher while a number of the students are in turn examining the patient, will necessarily be varied, as many patients with almost identical histories will constantly present themselves. It will be found advantageous for the teacher to endeavor to impress certain facts in connection with each case, not attempting to exhaust any portion of the subject, but rather to help the student to make accurate observations, to arrive at sensible conclusions, and above all to appreciate the limitations of his examination.

He may, for instance, explain how infection may proceed through the uterus and tube and on to the ovary and peritoneum. He may demonstrate results by showing specimens of abscesses of the ovary or pyosalpinx. He may speak of ovarian and parovarian cysts, and of tumors of the uterus, ovary, tube and broad ligament. He may advantageously discuss inflammatory conditions of the cellular tissue, and may also refer to extravasions of blood and the development of pelvic abscesses, discussing their localization and usual course in consequence of the anatomic conformation of the parts.

In a word, the instructor is now teaching first of all diagnosis, which depends upon facts. He must speak of facts, that is, of the various possibilities compatible with the history, and he must teach the student to arrive at a conclusion by showing him what he may expect to find, and then what he actually does find. He must not only explain, for instance, that a mass felt between the fingers is a pyosalpinx; he must show, as well, why it can not be anything else. Finally, he must determine the proper course of treatment, and must show clearly and distinctly not only why the treatment recommended in this particular case is the best treatment, but also why other methods of procedure, while sometimes of value, are inferior in merit to the plan proposed. Thus alone can be perfected a differential diagnosis worthy of the name.

The course of procedure described is applicable to all dispensary cases. Each student should see everything there is to be seen and thoroughly understand what he sees. He should personally examine every case, make his own diagnosis and determine the best method of treatment. All vague and erroneous ideas should be exploded by demonstrating facts, and all vagaries of treatment should be exposed by a thorough explanation of the reasons that dictate the plan of treatment proposed.

In teaching how to operate, the ideal method would be for each student to operate under the supervision of the teacher. Such a method is manifestly impracticable in the great majority of instances, and for this reason the best method of teaching the student how to operate is for him to observe how his teacher does, watching every step of the operation and understanding how and why every incision is made and every suture passed. It is evident such a method is incompatible with the performance on the part of the teacher of brilliant and theatrical exhibitions of his skill. It must be remembered that he is not demonstrating his ability as an operator; he is doing the best he can to show each student how the different steps of the operation are to be undertaken, and he explains why each step is necessary or expedient. The teacher instructs the student so that he may operate. There is no endeavor—at least there should be none—to impress the student with his teacher's wonderful dexterity and exceptional ability.

I have elsewhere described my "phantom perineum"

which has been[1] used in my clinics for many years. I have within the past two years perfected a "phantom cervix" and quite recently have been able to manufacture a "phantom" of the uterus, tubes and ovaries for the purpose of demonstrating various gynecologic operations. These "phantoms" are of different colored cloth made into bags to represent different organs and layers of tissue.

In the case of the perineum they show the necessity of a true restoration by actually restoring the parts to the position they occupied prior to the injury. The operations of Hegar, Emmet, Martin, Tait and others can be exemplified, and it can be clearly demonstrated how the fundamental principle is subserved regardless of the differences in detail of operative *technique*.

In the case of the cervix, Emmet's operation, Dührssen's incisions, the closure of an extensive laceration at the time of labor, and the different procedures for amputation of the cervix, can all be clearly demonstrated.

It is my practice to show the different steps of the operation on the "phantom" while one of my assistants operates on the patient. In a perineorrhaphy or cervix operation the students walk around to see the denudation after it is made. They then see the sutures as soon as they are passed, and finally see the result when the sutures are tied. At the same time they see each detail of the operation as it is demonstrated on the "phantom." They may not be impressed with the cleverness of the operator, but I honestly believe they learn how to operate, each for himself.

In abdominal operations I first invariable insist upon the necssity of absolute asepsis, and I explain the methods adopted for securing surgical purity on the part of the patient and the operator. The abdominal incision is made rather long so that the structure of the abdominal wall may be demonstrated. For half an inch perhaps the skin alone is incised. For another half inch the incision extends through the superficial fascia. Then the aponeurosis is incised and the separation of the muscular fibers is shown down to the aponeurosis beneath. Finally the subperitoneal fat is incised and an opening is made through the peritoneum.

As the students now walk around the patient each one sees the different layers of the abdominal wall which are demonstrated by means of dissecting forceps. While this is being done comment is made upon the relative thickness of the different structures, the variations of the blood supply and the necessity for controlling it, the advisability of avoiding the linea alba so as to secure stronger union.

By means of scissors the abdominal incision is now made to include all tissues and the omentum is shown. Incidentally the appearance of the peritoneum is demonstrated and the possibility of adhesions of tumors, intestine, etc., is alluded to. The patient is now placed in the Trendelenburg position. The intestines are allowed to fall forward or are pushed out of the way, and a laparotomy sponge of gauze is introduced. Again the students walk around so that each sees the fundus uteri, the tubes, the ovarian cyst, the subperitoneal fibroid, or whatever pathologic condition may be present.

Supposing the case to be a pyosalpinx, the teacher now introduces two fingers and feels for the fundus uteri, explaining what he is doing. He then passes his fingers behind the uterus and breaks up adhesions so that the mass may be dislodged. He brings it out of the abdominal incision and transfixes it in the usual manner. The students again inspect the tumor and observe how the ligature is passed and tied. They observe the stump after the mass has been cut away and notice the space it occupied prior to its removal.

While the teacher is at work in this manner he explains his reasons for each step of the operation and he refers briefly to modifications of the method that might be necessitated by certain complications. He explains the Staffordshire knot and his assistant demonstrates it on a towel. In the same manner other methods of ligating are shown and reasons are given for preferring the method adopted. The treatment of adhesions to intestine or different pelvic viscera is mentioned, and the advisability of vaginal incision in certain cases pointed out.

The indications for drainage are spoken of and the different methods discussed. The question of the "toilet of the peritoneum" and flushing out the peritoneal cavity are raised and definite directions are given. Finally, in closing the abdominal wound, the substance used and different methods adopted are explained and their relative value discussed. The students see the sutures in place and they notice how they are tied. They then see the application of the dressings and perhaps the hot bricks that are placed around the patient when she is put back to bed.

It is probable that I have indicated by what has already been said just what I mean by the best method of teaching gynecology. It is, I think, unnecessary to particularize further. To do so were to present a syllabus of my lectures on the different topics of gynecology.

It is evident the best method of teaching is not the best method of showing the phenomenal ability of the teacher. It is questionable if the latter method is of much benefit to the student. It must be remembered that he comes to learn. He will soon be thrown on his own resources. The fact that his teacher is a great man will help him but little in his extremity.

The student comes to us to learn and it is but proper he should be taught. He wants to see no operative pyrotechnics or only incidentally. The province of teachers is to teach. Their first duty is to help the student to help himself, and the method adopted should have that end constantly and preeminently in view.

217 Fifty-third Street.

[1] Annals of Gynecology, Vol. viii p. 670, Chicago Clinical Review, May, 1895.

THE VALUE TO THE MEDICAL STUDENT OF PHYSIOLOGIC STUDY.

BY JOHN A. BENSON, M.D., COLUMB.

PROFESSOR OF PHYSIOLOGY COLLEGE OF PHYSICIANS AND SURGEONS CHICAGO; PROFESSOR JURISPRUDENCE OF MENTAL DISEASES, CHICAGO SCHOOL OF LAW.

In a superstructure like that of the art and science of medicine wherein we find the various subdivisions, so imbricated and intimately related to and connected with each other that injury to or removal of any one would endanger the integrity of the whole, it is manifestly improper, and in fact impossible to attempt to place a greater value on any one part than can be ascribed to any and every other. For in such a whole no particular fractional part excels any other as far as specific value is concerned, and the value

and dignity of the whole equal the sum total of the individual parts. And indeed were we to attempt to remove or neglect any part, no matter what, we would not merely be subtracting a fractional value or dignity and thereby lessening the total by just so much as would be subtracted, but we would be seriously attacking the safety of the whole building and peradventure would find its walls toppling over and falling about our ears with a fearful clatter. But if we find that any one part can be discovered as having borne parental relations to any other, we can of a certainty recognize such importance; for the son, even though acquiring equal or superior dignity to his father, must ever respect that father, and the progeny must defer to the procreator. By reasoning on this line I purpose to demonstrate the nobility of physiology among its confrères and to give reasons why special and careful attention should be given thereto, and why our college authorities should appreciate the great benefits to the student of thorough and correct physiologic teaching. What is physiology? The answer to this question opens up a field far wider than is usually imagined. Physiology has been defined as being the study of the phenomena of life, teaching us the direct causes of these phenomena, the varying conditions under which they appear, their coincident chemic and mechanical accompaniments, their modes of operation and their results. From the department of physiology we learn all that can be known concerning the active functionating organism with its various subdivisions each working in its own particular manner, each function modified, accelerated, retarded or inhibited to meet the requirements of the economy at large, and the whole structure endowed with personality and imbued with vitality. So far we find physiologic lore to be of interest to the natural scientist outside of specific medical application, but to the practical physician I will now endeavor to show that physiology is an absolute *sine qua non*, and he must pay strict attention to this branch before he can hope to become a diagnostician, a pathologist or a therapeutist. I imagine that it is hardly necessary for me to remark that a physician devoid of diagnostic ability, of pathologic knowledge or therapeutic skill is totally unfit to attempt to practice the profession of medicine; and I desire here to record myself in the most positive manner as being of the opinion that such ability, knowledge and skill are in direct ratio to thoroughness and completeness of physiologic study, and that when any individual has without such thorough and complete study, attained even considerable success in medical practice, he remains an empiricist and can never be considered a scientific physician. A man, a work of art, or a piece of machinery we describe as being perfect, as being good, or indifferent or even bad. We use these terms relatively, comparing the object under examination with a known and accepted "standard" which may be abstract or concrete; and a principal duty of our wise men, of our physicians, our teachers, our artists and our scientists is to establish a "standard" in each of their several lines. There is nothing "new" in disease. It is a modification or an alteration of the normal; a perversion of, or a departure from the "standard" and it is the duty and the prerogative of the physiologist to give the practicing physician the "standard" he has to use. This "standard" is the living human body in a condition of healthy physiologic equilibrium, with all its various subdivisions working harmoniously together and constituting a perfect whole. After the student has become familiar with the normal action of this magnificent piece of mechanism, then and only then can he study the deviations therefrom which we term "disease." For example; of what use would it be for the tyro to place his ear to the chest of a patient suffering from cardiac disease? How would he know but that this tumultuous heaving, these varied sounds were the usual condition of affairs? First let him note all the characteristics of the heart's action, its rhythm, the accompanying sounds, the events taking place during the cycle, and the results and bearings of these events on far and near portions of the animal economy; then the slightest deviation from the known standard will mean something, and its specific value can be appreciated. A man practicing the profession of medicine without any "standard" to guide him, would resemble the unfortunate who was

> "Condemned in labor or the arts to drudge
> Without a second and without a judge."

Groping in the darkness of the impenetrable shade of ignorance, such a man could never advance, and would have to be placed in one of two categories, to-wit: knowing and appreciating the deficiencies and weaknesses of his position he would endeavor to ameliorate them, he would seek a way out of the darkness, and his voice would ring out for truth and light, as a

> "Child crying in the night
> A child crying for a light
> And nothing in its language but a cry."

For such a man there is hope. Or else blind and self-satisfied, he would recklessly stride along through the valley and the shadow firing blank shots into space and noting his own splendid marksmanship. Such a man is scientifically dead; for him there is no hope, no resurrection. Whose is the fault fundamentally in either case? The fault is at the door of the guides, of the teachers, of the leaders, of those who permitted or allowed such a lamentable condition to become possible.

This subject is one near and dear to my heart and peradventure were I not to call a halt and exert a reflex inhibitory influence on my pen, it might, by exercise, develop such strength and amplification as to emancipate itself from my autocratic grasp and galop along indefinitely. Worse and more pitiable then would be the fate of the distinguished Editor of the JOURNAL, than even that of the guests of Heliogabalus. For whereas the latter were smothered in roses, the former would of a certainty be drowned in "copy."

I imagine though that I have given in outline good and sufficient reasons for devoting time and attention to physiologic work; the next question that faces us is how should physiology be taught? To this I would answer that the work must be done in two ways: first, by direct observation; and second, by didactic explanation. In the first place I would familiarize the student with the well-developed, healthy, living human body as a whole, and his preliminary study in this regard I would have similar to that pursued by art students in painting and sculpture; that is the study of the nude, as conducted by director French of the Chicago Art Institute. Such a course of gross physiologic anatomy, modified somewhat perhaps to meet the requirements of the medical student, I hold to be of vast value. Then I would insist on a full

and complete laboratory course, not such a course as is but too often given (on paper in an annual announcement) but a thorough and painstaking course supervised by the professor of physiology himself, who would thus come into direct personal contact with each and every member of the class. Such work would be of the greatest value not only in inculcating physiologic data, but also in teaching the student how to think, how to draw and comprehend deductions from personally recognized conditions, how to explain to himself and reason out for himself the relations of abstract and concrete causes and appreciated results, and the bearings thereof. The master words for success in the attainment of actual knowledge are "direct observation," and only by this means can positive results be reached. Analogical deductions and inferences are unreliable and dangerous, no matter how cunningly traced, and the only data which can stand criticism are those born of experimental investigation. Structure and function are most intimately connected, and yet we find that we can not with a certainty depend on the structure of an organ as indicating its function. The two can only be correlated when direct examination demonstrates the fact of their association.

The lower we descend in the scale of life, the simpler do we find structure; in the lowest planes, the simplest. In these latter we note the existence of individual unicellular organisms without specific subdivisions, each part performing equally all the various vital functions. Thus the unicellular organism is uniform, simple and general, possessing the fundamental property of irritability and likewise the capability of initiating movement. This cell is therefore automatic and contractile, and at one and the same time is excretory, reproductive, and generally metabolic and motile, all these functions being exhibited equally by the same mass of protoplasm. As we mount higher we find various portions of the organism becoming more skillful in performing a few functions, and this for each part soon is narrowed down to one special function. At the same time, to a greater or lesser extent, the part becoming so specially educated withdraws from the performance of general functions. Each part becoming special renders the whole more complex, and we have anatomic changes taking place coincident with the educational amplifications. The accompanying conditions are; with relation to function, "specialization;" with relation to structure, "differentiation."

In order that we should acquire as distinct and clear an understanding as is possible of these complex, specialized and differentiated structures, we must begin our study at the lowest plane of life and note carefully the physiologic, histo-chemic and anatomic attributes of the simplest forms there to be found; continuing our observations on the same lines and mounting gradually higher and higher, we ultimately reach the most complex combinations. And further, in arriving at explanations of the structural, chemic and functional phenomena that confront us in the higher planes, we must go back to the period when these highly complex forms were themselves of simple degree. In this way embryology enters into our field of research, and in comparing the amplification and development of animal life generally with that of an individual member of some particular species, as for instance a human being, we find that we can aptly characterize the one as being a simulacrum of the other, the only marked difference being the element of time which however may safely be left out of consideration.

At the highest point in the scale of life we discover the exact opposite of what we studied in the lowest, and we find the organism now to be multiform, complex and special. Each one of the various parts of such an organism, has to be studied separately, in order that we should determine as far as possible its individual characteristics, and this study should be begun in the particular tissue after isolation from the economy as a whole. Then entire organs or apparatus of associated organs have to be considered and this can only be done by experimental observation upon the living structures.

Last of all the functionating entity must be observed, all the parts, all the organs, all the associated apparatus of organs brought into relation with each other and working in harmonious or alternating action. This must all be done on the living body, aided by dissections, schema, working models, charts, diagrams and so forth.

In pursuing such work the teacher will be required to devote a certain amount of time to both structural and chemic analyses of the tissues, so physiology and histo-chemistry are indissolubly united. These observations, examinations and experiments require laboratory work. Here under the direct guidance of the physiologic professor, each student works as an individual alone and to a great extent apart from his co-laborers, but at stated and frequent periods the entire class should meet the professor in the lecture amphitheater for didactic instruction. Here the laboratory work is fully explained and amplified, deductions are made, theories are advanced, causes and effects are considered, opinions are reduced, and work on similar lines in other portions of the world is reviewed; while the laboratory illustrations are supplemented by working models, sketches, charts, schemes, etc. Again, frequent convocations should be held at which the professor should question each student on the previous work, and this should be looked upon as being as valuable as the other modes of instruction, as the student's ideas on the subject matter can be elucidated and he can be materially assisted.

Speaking with an authority born of experience and study, I would say: 1. The physiologic course should be included in the curriculum for both the freshman and sophomore years. 2. Sufficient time should be given for at least five days in each week during the course, to laboratory work and explanatory or didactic instruction. 3. Once at least each week there should be a physiologic convocation in which the previous work should be carefully reviewed. 4. The chair of physiology should be a salaried position, as it is impossible for a practicing physician to properly administer its duties and bear its responsibilities. This chair is about the only one in a medical college which, to a practicing physician, has no commercial value, and the work of the incumbent each year is not by any means accomplished when the lecture course is finished. During vacation time original research, individual observation, review of the work of others, travel, visits to foreign and domestic universities and colleges and their laboratories, all are matters that will occupy time; in short as soon as one course is completed, preparations for the next should be initiated, for no scientific physiologist can depend on this year's notes for the next year's course; he can not

stand still, but must gain or lose, advance or retreat. 5. There must be a fully equipped laboratory in all that the words imply, with a complete zoologic addition. 6. In the freshman year there should be a preparatory course on physiologic artistic anatomy. There are many other details in this connection that time and space will not permit me now to dilate upon, but I would conclude by expressing the positive opinion that unless the fundamental elements of the positions above outlined by me are in force in a medical school, such school is not doing its duty either to the students or to the profession at large, and does not deserve to stand in the front rank. In a very large majority of our institutions of medical learning, physiology is slighted and ignored, and money and time are spent and much advertising indulged in concerning the so-called practical branches, the authorities forgetting that there is no branch so sternly practical to both the under-graduate and the post-graduate as is physiology.

THE MEDICAL COLLEGES OF THE UNITED STATES.

The Editor of the JOURNAL a few weeks ago addressed a circular to the Secretary or Dean of the various Medical Colleges, requesting them to state their plan of education, including the requirements for admission, the facilities they possessed for teaching, and the cost of attendance.

The general response to the circular has produced the very complete summary here presented.

It should be remembered that these statements are those prepared by the schools themselves and in no way changed in this office.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES.

The Association of American Medical Colleges, requires for all members that candidates for matriculation will be allowed admission, subject to the conditions prescribed by Article III of the Constitution of the Association:

ARTICLE III.

SECTION 1.—Members of this Association shall require of all matriculants an English composition in the handwriting of the applicant of not less than two hundred words; an examination by a Committee of the Faculty, or other lawfully constituted Board of Examiners, in higher arithmetic, algebra, elementary physics, and Latin prose.

SEC. 2.—Graduates or matriculants of reputable colleges or high schools of the first grade, or normal schools established by State authority, or those who may have successfully passed the entrance examination provided by the statutes of the State of New York, shall be exempt from the requirements of Section 1.

SEC. 3.—Students conditioned in one or more of the branches enumerated as requirements for matriculation shall have time until the beginning of the second year to make up such deficiencies; provided, however, that students who fail in any of the required branches in this second examination shall not be admitted to the second course.

SEC. 4.—Colleges granting final examination on elementary subjects to junior students shall not issue certificates of such final examination, nor shall any member of this Association confer the degree of Doctor of Medicine upon any person who has not been first examined upon all the branches of the curriculum by the Faculty of the College granting the degree.

SEC. 5.—Candidates for the degree of Doctor of Medicine shall have attended three courses of graded instructions of not less than six months each in three separate years.

SEC. 6.—Students who have matriculated in any regular college prior to July 1, 1892, shall be exempted from these requirements.

THE SOUTHERN MEDICAL COLLEGE ASSOCIATION.

The Southern Medical College Association makes the following requirements, viz.:

Every student applying for matriculation must possess the following qualifications:

He must hold a certificate as the pupil of some known, reputable physician, showing his moral character and general fitness to enter upon the study of medicine.

He must possess a diploma of graduation from some literary or scientific institution of learning, or certificate from some legally constituted high school, General Superintendent of State Education, or Superintendent of some County Board of Public Education, attesting the fact that he is possessed of at least the educational attainments required of second-grade teachers of public schools; provided, however, that if a student, so applying, is unable to furnish the above and foregoing evidence of literary qualifications, he may be permitted to matriculate and receive medical instruction as other students, and qualify himself in the required literary departments, and stand his required examination, as above specified, prior to offering himself for a second course of lectures.

The foregoing certificate of educational qualifications, attested by the Dean of the medical college attended, together with a set of tickets showing that the holder has attended one full course of medical lectures shall be essential to attendance upon a second course of lectures in any college belonging to the Southern Medical College Association.

(1) . . . . . ,189–

Dean of Medical Department of University of Tennessee—Nashville Medical College:

DEAR SIR—Mr. . . . . of . . . . . , is a gentleman of good moral character. I recommend that he be allowed to enter upon his medical studies in your college. He has been my pupil . . . months.

Yours,

[Sign here] . . . . . .

(2) . . . . . , 189–

Dean of Medical Department of University of Tennessee—Nashville Medical College:

DEAR SIR—I have examined Mr . . . . . , of . . . . . and find his scholastic attainments equal to those requisite for a second-grade teacher's certificate in our public schools.

Yours,

. . . . . .

Supt. of Pub. Instruction.

BIRMINGHAM MEDICAL COLLEGE.

BIRMINGHAM, ALA.

This College requires an attendance of three terms of six months each before application for graduation, and a general average of 75 per cent. for a degree. The school has good hospital advantages and abundant clinics, and furnishes splendid facilities for the study of medicine. There is an excellent building well arranged for medical instruction, and well equipped laboratories. W. H. JOHNSTON, M.D., Dean.

MEDICAL COLLEGE OF ALABAMA.

MOBILE, ALA.

The thirty-first annual session of this institution will begin Oct. 12, and continue six months. The Faculty offer a curriculum that has been carefully and systematically graded. The chemic, microscopic, surgic and pharmaceutic laboratories are fitted in accordance with the most modern and advanced ideas, and afford ample and convenient facilities for the practical work exacted of each student in these departments. The dissecting rooms are large and well ventilated, and material for practical anatomy abundant. Medical and surgical clinics are held daily at the City Hospital and College Dispensary. Fees, including laboratory course $100 for each session. Diploma fee, $25. The requirements for matriculation and for obtaining the degrees are set forth in the annual announcement, which will be sent upon application.

Geo. A. Ketchum, M.D., Dean.

ARKANSAS INDUSTRIAL UNIVERSITY.

MEDICAL DEPARTMENT, LITTE ROCK, ARK.

Four years graded course. Twenty-three profes-

sors and teachers. Fees each course $58; matriculation fee paid once, $5. Graduation fee, $25. Resources for clinic instruction, Pulaski County Hospital, Little Rock City Hospital, Little Rock Infirmary. Daily clinics.

Regular winter course begins Nov. 2, 1896, and continues six months. Preliminary course begins Oct. 5, 1896. J. A. Dibrell, M.D., President and Dean of Faculty.

E. R. Dibrell, Secretary.

COOPER MEDICAL COLLEGE.

SAN FRANCISCO, CAL.

Thanks to the generosity of its President, L.C. Lane, this school is amply provided with facilities for instruction. Its handsome buildings, its hospital and its endowments and funds represent half a million of dollars. An educational qualification or an examination is required before admission. Four courses of lectures are necessary to complete the curriculum, except for such as have through-college education or otherwise accomplished the work required for the first year, The regular or long term begins June 1 and continues six months. The short term begins February 1 and continues three months. The graduation exercises take place in December. The regular course is held in summer and autumn. The objections to the summer which obtain on the Atlantic border are entirely unknown here. The dryness of the atmosphere prevents decomposition; thus dissecting can be carried on with far more comfort and satisfaction than during the winter or summer months in other climates. Excellent clinical facilities are offered at the City and County Hospital and at the extensive College Dispensary. The Lane Hospital, adjoining the College, now just completed, will accommodate a hundred patients. A fee of $130 is charged for each of three courses: Matriculation fee $5; demonstrator's $10; graduation $40.

Henry Gibbons, Jr., M.D., Dean; William Fitch Cheney, M.D., Secretary.

UNIVERSITY OF CALIFORNIA; MEDICAL DEPARTMENT.

SAN FRANCISCO, CAL.

The sessions begin September 1, and continue eight months. During the term all the branches of medicine and surgery are taught, didactically and clinically. Regular clinics are held three days in the week at the City and County Hospital (450 beds), where the professors of the practical chairs have charge of wards and possess every advantage for the instruction of students. There is also an active clinic conducted three times a week at the College Dispensary, where large numbers of patients are examined and treated before the classes. Didactic lectures are given daily by the professors, and evening recitations are held several times a week.

The dissecting room is open throughout the entire year. Material is abundant and costs but little.

The facilities for bedside study have been largely increased of late, and the student will find opportunities at his command which, for comprehensiveness, are nowhere surpassed.

The Medical Department of the State University was one of the first in the United States to adopt the four years' term of study. No student can present himself for final examination until he has attended four annual courses of medical lectures and clinics.

Graduates of accredited literary and scientific colleges, and such as have completed two years of the natural science department of a recognized university, are admitted to the second class without examination.

Fees: Matriculation (paid but once), $5; demonstrator's ticket, $10; fee for each course of lectures, $100; graduating fee, $25.

For the annual announcement and catalogue giving regulations and other information, address R. A. McLean, M.D., Dean.

DENVER MEDICAL COLLEGE.

MEDICAL DEPARTMENT OF THE UNIVERSITY OF DENVER, COLO.

(Incorporated in 1881.)

The next session of the school begins Sept. 8, 1896. The Faculty is composed of fifteen professors and ten assistant professors and lecturers. The school offers exceptional advantages to students who can not complete their college work in the rigorous eastern climate. Colorado is justly noted for its mild winters, and students coming to Denver can pursue their medical studies in the school surrounded by amply equipped laboratories, by large clinics and by an active, interested corps of teachers. The College is a member of the Association of American Medical Colleges and confirms to every requirement of that Association.

Fees: Matriculation (annually), $5; tuition, $75; graduation (not returnable), $25; demonstrator's ticket (including material), $10; chemic laboratory ticket, $10; pathologic and physiologic laboratory, extra. No tuition fee is required from students who have paid for and attended three full courses of lectures in this College. Such students are admitted to the fourth course upon the payment of the matriculation fee only.

Samuel A. Fisk, M.D., Dean; E. R. Axtell, M.D., Secretary.

GROSS MEDICAL COLLEGE.

DENVER, COLO.

The College is legally chartered under the laws of the State of Colorado. It was established in 1887 and has made such rapid progress that at present it stands foremost among the medical colleges of this section. Being a member of the Association of American Medical Colleges, it complies with all the requirements of this Association and has adopted the four-year course of study.

This institution is well equipped for medical instruction, containing four large lecture rooms, abundant laboratory room and facilities. In close proximity to it is a large free dispensary, which furnishes abundant material for clinical instruction. It is situated within a few blocks of the County Hospital, at which regular clinics are held and bedside instruction given. The tuition fee is $75 each for the first three years and $30 for the fourth year. There is no graduation fee and no hospital fee.

Thomas Hayden Hawkins, A. M., M. D., Dean; Robert Levy, M.D., Secretary.

UNIVERSITY OF COLORADO; MEDICAL DEPARTMENT.

DENVER, COLO.

This school is a member of the Association of American Medical Colleges and gives a graded course of four years, the term extending from the first week of September to the third week of May.

The first year's course is given at the university in Boulder, where the facilities for instruction in the fundamental sciences are excellent. In order to

obtain superior clinical advantages the instruction of the second, third and fourth years is given in Denver. The dispensary of the school and hospitals of Denver furnish a large amount of clinical material.

The climatic advantages of Colorado enable students to pursue their studies here who could not do so elsewhere.

Tuition: For residents of the State, $35 per year; for non-residents, $45. Graduation fee $10.

For further information apply to Clayton Parkhill, M.D., Dean; Howell T. Pershing, M.D., Secretary.

YALE UNIVERSITY, DEPARTMENT OF MEDICINE.

YALE MEDICAL SCHOOL, HARTFORD, CONN.

In the fall of 1810 a charter was granted to the President and Fellows of Yale College and the President and Fellows of the Connecticut Medical Society, authorizing them to unite according to the terms of certain "Articles of Union," before agreed upon, for the establishment of a medical seminary, to be styled the Medical Institution of Yale College. Two years later the school was organized, and in the fall of 1813 instruction was begun.

While the attention of the student is particularly directed to those branches which can be studied to advantage only in a well equipped medical school, the value of clinical instruction is fully appreciated and amply provided for. The curriculum consists chiefly of recitations of assigned readings in text-books, systematic laboratory work and personal instruction in clinics.

Terms of admission: Candidates for admission must be at least 18 years old, and must present satisfactory testimonials of moral character from former instructors or physicians in good standing. Each candidate must present proof that he has passed the matriculation examination of some scientific, literary or professional college in good standing, or present testimonials from the proper officer that he has pursued the course at some high school, academy or preparatory school approved by the faculty, or he must pass an examination in the following subjects:

REQUIREMENTS FOR A DEGREE.

1. He must be at least 21 years of age, and must sustain a good reputation for moral character.

2. He must have spent three years as a student in this school, or if but one or two years in this school, he must have pursued such studies in some other recognized institution, as are considered by the faculty to be the equivalent of the remainder of the full term of study. The last year must have been in this school.

3. He must have passed to the satisfaction of the faculty the prescribed examinations of the course; and he must have presented a satisfactory thesis on some subject relating to medicine. The thesis should be presented to the dean on the third Wednesday before Commencement.

Fees and expenses first year: Matriculation (paid but once), $5; tuition, $140; practical anatomy (including instruction and material), $10. Second year: Tuition, $140; practical anatomy (including instruction and material), $5; practical pharmacy, $5. Third year: Tuition, $80; graduation, $30.

Herbert E. Smith, M.D., Dean.

MEDICAL DEPARTMENT COLUMBIAN UNIVERSITY.

WASHINGTON, D. C.

The seventy-fifth session begins Sept. 30, 1896. The numerous advantages afforded by the City of Washington for the study of medicine are well known. The clinic facilities of four large hospitals are open to students of the college. The new Congressional library, almost completed, will give the students additional advantages scarcely to be equaled in any other city.

The course extends over four years, and the annual fee for all expenses is $106.

The bacteriologic and pathologic departments are under the direction of an accomplished teacher, who is also in charge of the Army Medical Museum of the city. Extensive experiments upon the antitoxins are being conducted by the biochemic laboratory of the Department of Agriculture, and by act of Congress the Government laboratories are available to students for clinical instruction.

D. K. Shute, M.D., Dean; E. A. De Schweinitz, Secretary.

MEDICAL DEPARTMENT, GEORGETOWN UNIVERSITY.

WASHINGTON, D. C.

The next session of this school will begin October 1, and continue until May 13, 1897. The four years' course is obligatory. Instruction is given by lectures, recitations and demonstrations in the lecture rooms, as well as by practical exercises in the dissecting room and the various laboratories, which are especially well arranged and equipped for this most important method of modern teaching. Ample and excellent facilities for clinical instruction are furnished by the hospitals and dispensaries. Positions as resident physicians in these are secured by competitive examination. Congress has opened the Government museums and libraries to students of medicine, greatly enhancing the facilities otherwise furnished. The fees are: Matriculation, payable but once, $5; lectures and laboratories for each year, $105. No other charges except a small one for anatomic material.

J. W. H. Lovejoy, M.D., President; G. L. Magruder, M.D. Dean.

HOWARD UNIVERSITY, MEDICAL DEPARTMENT.

WASHINGTON, D. C.

This school opens its twenty-seventh session, October 1. It has a graded course of four years. Each college year continues seven months. Students are required to complete the studies in each year before being promoted to the next succeeding year. A thorough training is given in histologic, biologic, pathologic and chemic laboratories. The Freedmen's Hospital is upon the grounds of the college and affords ample clinic facilities to the student to study surgery, obstetrics, gynecology and practice of medicine. The tuition fee is $60 per term. Small laboratory fees are charged to meet the necessary expenses. The college is coëducational. Students are instructed and examined in the following branches: Physiology, anatomy, chemistry, toxicology, materia medica, therapeutics, obstetrics, gynecology, practice of medicine, surgery, minor surgery, neurology, histology, bacteriology, pathology, ophthalmology, otology, pediatrics, medical jurisprudence and psychiatry.

T. D. Hood, M.D., Dean; C. B. Purvis, Secretary.

ATLANTA MEDICAL COLLEGE.

ATLANTA, GA.

This college was established in 1854 and has been

in continuous operation since except during the war. The school requires three terms of six months each and regular courses in the chemic, bacteriologic and pathologic laboratories. Clinics are held daily both at the college and at the city hospital, to which the students have access. Written examinations are held at the end of each session, and students must show satisfactory progress before they are allowed to advance to the next course.

The college building is especially commodious, having three large lecture rooms, each with a seating capacity of 200 and in addition a modern amphitheater arranged to seat 300 students.

The fees are $100 for each session, diploma $30; these fees are adhered to and under no circumstances is any reduction given to students. W. S. Kendrick, M.D. Proctor.

MEDICAL COLLEGE OF GEORGIA.

MEDICAL DEPARTMENT UNIVERSITY OF GEORGIA.

AUGUSTA, GA.

Organized 1832. Three years graded course, six months in each year, October 1 to April 1. Faculty has under its exclusive control three large hospitals, the policlinic, the city dispensary and the out-door obstetric service. From these sources abundant clinic material is always on hand for clinic instruction of students. Clinic teaching occupies a prominent place in instruction of students. Every member of the graduating class is accorded a two weeks residence in the hospitals. Preliminary educational qualifications required of students; proficiency in arithmetic, elementary English, geography, spelling, United States history, and English composition. Fees: Matriculation $5; practical anatomy $10; general course of instruction $75; diploma or graduation fee $30.

Eugene Foster, M.D., Dean; Thos. D. Coleman, A.B., M.D., Secretary.

COLLEGE OF PHYSICIANS AND SURGEONS.

CHICAGO, ILL.

The fifteenth annual course begins September 22, and continues for seven months. A spring course is also given, for which there is no additional charge to students in the college. The spring course of 1897 begins April 21 and ends June 30. The curriculum of the college is graded, and four years are required to complete the course. Instruction is didactic and clinic and by laboratory teaching. Instruction during the first two years is largely by laboratory work; in the last two years largely clinic.

The equipment of the college includes the college building proper, which contains the lecture rooms, clinic rooms; a six-story laboratory building; and a college hospital. All of these buildings are amply furnished for the purposes to which they are severally devoted. The college hospital has recently been acquired by the purchase of a modern hospital building formerly occupied by the Post-Graduate Medical School. This gives the college a hospital of 125 beds with three aseptic operating rooms and a clinic amphitheater. The clinic material at the disposal of the college is large enough to insure the hospital being kept full all the time. Hospital service is a part of the senior class work. In the course of a year each student gets practical bed-side experience of the most varied kinds.

The class is divided into sections for the purpose of pathologic work in the hospital; so that the students are given training in exact methods of technical examinations, and gain at the same time a correct appreciation of the relative importance of the pathologic and clinic elements of their cases.

Clinics are given daily in the County Hospital by members of the Faculty. There are also autopsies daily at the county morgue to which the students have access.

The college has abolished formal final examinations, In lieu thereof, the students are graded upon their daily work, upon their recitations and upon examinations held during the course of the year. One-fourth of the time of each teacher is given to quizzing. Nine scholarships of the value of $100 each are awarded to the students who make the best records in the college. The annual fees are $110. There are no extras.

William Allen Pusey, M.D., Secretary.

CHICAGO POLICLINIC AND HOSPITAL.

A clinic school for post-graduate instruction in medicine and surgery, Chicago, Ill. It is conveniently located in a populous district which furnishes an abundance of clinical material. The instruction is entirely clinic and offers unequaled facilities for the general practitioner to personally examine cases and follow out the latest approved means of diagnosis and methods of treatment.

Clinics covering all departments of medicine and surgery are in progress daily from 8 A.M. to 5 P.M.; a well equipped bacteriologic and chemic laboratory is a notable feature of the institution and affords the practitioner an opportunity to become acquainted with the most important modern branches. As all clinics are conducted throughout the year, students may enter at any time. The fees are moderate and vary according to the number of branches taken and the length of time one desires to remain.

Truman W. Miller, M.D., President.

Fernand Henrotin, M.D., Secretary.

NORTHWESTERN UNIVERSITY MEDICAL SCHOOL (CHICAGO MEDICAL COLLEGE).

CHICAGO, ILL.

This school was the first in this country: 1, to enforce a standard of preliminary education; 2, to adopt longer annual courses of instruction; 3, to grade the curriculum of studies.

The laboratory building contains laboratories of physiology, histology, anatomy, pathology, bacteriology, chemistry, pharmacology and pharmacognosy of the most modern form and with best equipments.

Davis Hall is a very perfect out-patient infirmary, where twenty-five thousand patients are treated annually.

A feature unique to this school is the grading of clinical instruction and the maintenance of small clinics by greatly multiplying them so that students may obtain individual instruction. Forty clinics are conducted weekly at Mercy and St. Luke's Hospitals and Davis Hall.

Instruction is given by lectures, recitations, conferences, laboratory and clinic methods. Numerous electic courses are offered to students who desire them, either that they may obtain "honors" or special knowledge. These courses are chiefly laboratory or combined laboratory and clinic.

The requirements for admission are a diploma from a recognized college, school of science, academy or high school, or an examination in English, arithmetic, algebra, physics, Latin and any one of the follow-

ing: chemistry, general biology, zoology, botany or German.

College opens Oct. 6, 1896; Commencement is June 17, 1897. The fees are, matriculation $5; annual $100; laboratory (for first and second years) $10.

The Faculty consists of thirty-seven professors and forty-three instructors and demonstrators.

N. S. Davis, M.D., Dean.

NORTHWESTERN UNIVERSITY WOMAN'S MEDICAL SCHOOL.

CHICAGO, ILL.

This school was founded in 1880 as the "Woman's Hospital Medical College." In 1892 it was incorporated with the Northwestern University. It is conducted as a regular school of medicine for the education of women only.

Students graduating in 1899, and subsequently, are required to attend four graded courses of lectures, of not less than eight months each.

Instruction is given by didactic lectures, recitations, clinical lectures and practical work. Objective methods are given a prominent place.

Practical instruction is given in the laboratories of anatomy, chemistry, histology, physiology, pathology, bacteriology and pharmacy. Modern methods are pursued in all these laboratories.

The Cook County, the Mary Thompson Hospital for Women and Children, The Wesley, The Woman's Hospital of Chicago, and various other hospitals to which the students have access, afford excellent facilities for clinic instruction. Through these various hospitals and the college dispensary there are unusual opportunities for practical obstetric work. Each day of the week one or more clinics are held in the college building.

A matriculation fee of $5.00 and an annual fee of $75.00 are required. An extra charge is made for tickets for laboratory and hospital courses.

POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.

CHICAGO, ILL.

It has just completed a magnificent building, thoroughly equipped for modern scientific post-graduate instruction; convenient surgical amphitheaters, fine, well-lighted laboratories and clinic rooms, comfortable reading and smoking rooms, automatic ventilation, electric lights and elevator.

The college is located at 2404 Dearborn Street, in the medical center of Chicago, and with unequaled hospital advantages, an abundance of clinic material, comprehensive and advanced curriculum; large working faculty and a continuous course throughout the year.

Students may matriculate with equal advantage at any time and receive a post-graduate course that is unsurpassed.

For particulars address Franklin H. Martin, M.D., Secretary.

RUSH MEDICAL COLLEGE.

CHICAGO, ILL.

The fifty-fourth course of lectures of this institution begins Sept. 29, and continues eight months.

The new laboratory building, in which are located the anatomic departments and all the laboratories, presents an unexcelled series of working rooms for the undergraduate. No more extensive and thoroughly equipped dissecting room is to be found in any medical college. Every student is required to take special courses in laboratory instruction in histology, pathology, bacteriology and materia medica as well as in chemistry. The laboratories for these different special courses are extensively and thoroughly equipped.

A special feature of the instruction in this institution is the large number of men attending exclusively to teaching by recitations in the different classes divided into sections.

The clinics of this College are an especial feature of its instruction. Nearly all of them are held in the afternoon. In some of them the students are required to make their examinations and to defend their diagnoses before the class. The adjoining Presbyterian Hospital affords facilities for clinical instructions unsurpassed anywhere. A vast amount of surgical operations of all kinds is housed in this hospital and students of this college enjoy the advantage of such operations in the clinics to an extent equaled by no college in this country.

The Central Free Dispensary connected with the College affords about one thousand patients monthly. They are extensively utilized for clinical purposes throughout the year.

Fees: The general ticket $125, and the matriculation fee $5.

Edward L. Holmes, M.D., President.

James H. Etheredge, M.D., Secretary.

CENTRAL COLLEGE OF PHYSICIANS AND SURGEONS.

INDIANAPOLIS, IND.

The Faculty have remodeled the college building at an expenditure of $4,000; this also includes the superb equipment in the several laboratories. The advantages for clinical teaching are greatly enhanced by the college dispensary, which is in charge of two physicians appointed by the faculty. The staff physicians that have been selected from the faculty also hold clinics at the Indianapolis City Hospital, St. Vincent Hospital, Deaconess Protestant Hospital and the Indianapolis City Dispensary.

The college is a charter member of the Association of American Medical Colleges and has adopted the four-years' graded course of lectures. The instruction consists of didactic lectures, practical demonstrations and personal laboratory investigations. The eighteenth regular session will open Sept. 23, 1896, and close March 24, 1897. The fees of the regular course are as follows: Matriculation, $5; laboratory ticket (anatomy, chemistry, bacteriology, pathology or histology), $5; general ticket, $40; demonstrator's ticket (anatomy, chemistry, bacteriology, pathology or histology), $10; hospital ticket (includes all hospital fees), $6; graduation fees, $25.

Joseph Eastman, M.D., LL.D., President; T. B. Eastman, A.M., M.D., Secretary and Dean.

FORT WAYNE COLLEGE OF MEDICINE.

FORT WAYNE, IND.

The college was organized in 1879. The length of term is six months with a four years' graded course. The expense for fees in all the departments will be about $75 per year.

Clinics are held in the St. Joseph and Hope Hospitals, where there is an abundance of clinic material, both surgical and medical. The special advantages are, that in these hospitals many capital operations are made in the presence of the students, the seniors being assistants.

The college has fifteen professors and five lecturers.

C. B. Stemen, M.D., Dean.

MEDICAL COLLEGE OF INDIANA.

INDIANAPOLIS, IND.

Twenty-sixth annual term begins October 2 and ends April 2. Matriculation, $5; laboratory ticket, $5; professors' tickets, $40; demonstrator's ticket, $10; graduation fee, $25; hospital tickets, $6. Clinics are given at the city hospital, St. Vincent's Hospital, Bobb's Free Dispensary, city dispensary and college dispensary. Daily clinic instruction throughout the course. The clinic, histologic, pathologic and bacteriologic laboratories, dissecting rooms and museum are thoroughly appointed and complete, and no extra charges for same. The munificent gift of Dr. William Lomax of Marion, Ind., added to the former resources and equipment of the college enables the trustees to construct and equip an ideal modern medical college, which shall meet the most exacting demands for advanced, thorough medical education.

Jos. W. Marsee, M.D., Dean.

IOWA COLLEGE OF PHYSICIANS AND SURGEONS,

MEDICAL DEPARTMENT OF DRAKE UNIVERSITY.

DES MOINES, IOWA.

The fifteenth annual session will begin Sept. 16, 1896, and continue twenty-four weeks.

The fees are: Matriculation, $5; general lecture ticket, $45; final examination, $5; hospital, $5; practical anatomy, $10; chemic laboratory, $10; bacteriologic, $10. The college has new quarters, with ample laboratory facilities. A large number of new microscopes have been recently purchased, and the course in chemistry, bacteriology and histology is the same as in other first-class schools. Clinics will be held one-third of the time at the Cottage and Mercy Hospitals. The county and city patients are treated at Cottage Hospital and afford an abundance of clinical material. The Mercy Hospital is a large new building, with a capacity of seventy-five beds. This affords good clinic advantages; in fact, better than any other hospital in the State.

The faculty consists of fourteen professors and nine lecturers. All have had from two to twenty years' experience as teachers. The course is four years' attendance upon lectures. The requirements of admission are those of the Iowa and Illinois State Boards.

Lewis Schooler, M.D., Dean.

STATE UNIVERSITY OF IOWA, MEDICAL DEPARTMENT.

IOWA CITY, IOWA.

The twenty-seventh annual session begins Sept. 16, 1896, and continues six months, closing in March, 1897.

The requirements for graduation are those of the Association of American Medical Colleges and the State Board of Medical Examiners. Fully equipped laboratories in pathology, histology, chemistry and pharmacy, and full clinics in all branches. Special advantages to advanced students in assisting at clinics and observing treatment of cases at Mercy Hospital. Positions as internes in all State hospitals open for limited terms of service to graduates passing meritorious examinations.

Fees: Freshman year, $63; sophomore, $48; junior, $33, and senior, $38. No charge for dissecting material.

For catalogue, address W. D. Middleton, A.M., M.D., Dean, or E. W. Rockwood, M.D., Secretary.

KEOKUK MEDICAL COLLEGE.

KEOKUK, IOWA.

The regular fall and winter session opens in September and continues for six months.

The faculty is composed of experienced medical teachers. Clinics regularly at St. Joseph's Hospital.

A ten weeks' reading and recitation course following the regular winter session is provided.

Fees for regular session: Matriculation, $5; lecture fees, including hospital ticket, $28; graduation fee, $30. Material at cost.

J. A. Scroggs, M.D., Secretary.

HOSPITAL COLLEGE OF MEDICINE.

MEDICAL DEPARTMENT CENTRAL UNIVERSITY OF KENTUCKY.

LOUISVILLE, KY.

The regular session of this college begins in January and end in June. The course of instruction is conducted by ten professors and fifteen tutors, demonstrators, and assistant instructors.

Freshmen are required to present evidences of good moral character, and satisfactory preliminary education, in documentary form. The course of study is graded and divided into three annual terms of six months each.

Candidates for the degree of Doctor of Medicine must be 21 years old, of good moral character, must have studied medicine four years, including preliminary reading with a preceptor, and have attended three complete courses of lectures, no two of which shall have been taken within a period of twelve months, and the last of which shall have been in this institution. He must have dissected during at least two sessions, and have attended two courses of clinic and hospital instruction.

The course of study at this college, in addition to the usual didactic lectures and quizzes, embraces two clinics every day in the college building; not less than four clinic lectures every week at the City Hospital, beside bedside instruction in the wards of the City Hospital and College Infirmary.

Fees: Professors', $75; practical anatomy, including material, $12; bacteriology and histology, laboratory fees, first year, $10; chemical laboratory, second year, $10; surgical laboratory, $10; fee for final examination (not returnable), $30; hospital fee required by the city, $5. No fee is charged for intermediate examinations.

P. Richard Taylor, M.D., Dean.

KENTUCKY SCHOOL OF MEDICINE.

LOUISVILLE, KY.

It is midway between the North and the South, and holding its session from January to June inclusive, is the pioneer spring and summer graduating school of this country.

It began in 1817 as the Medical Department of Transylvania University, but separated and took its present name in 1850. Since that time its success has been remarkable, having as many as 550 students at a time. It has given medical education to more than five thousand physicians. With an efficient and experienced faculty of thirty teachers, ample and thoroughly equipped laboratories and a large modern hospital of its own, recently erected, adjoining the college, this school is offering facilities for practical and thorough instruction unsurpassed in this country. It is a strictly one-priced college, each student without exception paying the same. For catalogue write to Samuel E. Woody, M.D., Dean.

NEW ORLEANS UNIVERSITY, MEDICAL DEPARTMENT.

NEW ORLEANS, LA.

This institution has a four years' course of study of five months each. The tuition fee is $30 per session, while good board and room, with fuel, light and washing, can be obtained in private families for from $12 to $15 per month. The total expense of the session need not exceed $125. The building is situated on an open, airy space and is a large three story brick, well lighted and ventilated. Street cars lines from all parts of the city make it easily accessible. The second story is used exclusively for a hospital and nurse training department, where students have the advantages of experience in the sick room every day. The city with its 250,000 inhabitants and large transient population affords excellent clinic advantages. The next session opens September 15.

C. F. Dight, M.D., Dean.

MEDICAL DEPARTMENT TULANE UNIVERSITY OF LOUISIANA.

NEW ORLEANS, LA.

Since 1893 this college has occupied a new and extensive building, with five large and fully equipped laboratories. Students are admitted without payment of any hospital fees to the great Charity Hospital, which has more than 30,000 patients annually and thus provides unsurpassed practical advantages (clinic, anatomic, etc.) for the study of medicine. A gymnasium for the use of students is attached to the college. The most recent improvements consist of numerous and important additions to the laboratory of the professor of chemistry, and the reorganization of the college library, rendering it more useful and accessible to students and the medical profession.

For catalogue and information address S. E. Chaillé, M.D., Dean.

BALTIMORE MEDICAL COLLEGE.

BALTIMORE, MD.

This college was organized in 1881. Within the past five years it has expended $200,000 in the erection and equipment of a college and hospital which contains every modern facility and appliance required. Its laboratories are equal to those of the best institutions of this country. Its Faculty contains twelve professors and over forty associate professors, lecturers, demonstrators and assistants.

Its hospital and out-door department furnish abundance of material for clinic instruction. It has a special lying-in hospital of over thirty beds in addition to its out-door obstetric clinic. This college is a member of the Association of American Medical Colleges and has adopted the four-year graded course according to the regulations of this Association. During the past session its classes numbered over 514 students.

Clinics are conducted by the professors and their associates during the entire year.

The dental department of the college has one of the best equipped buildings in this country.

A preliminary course of lectures will begin September 1 and continue until October 1.

Tuition fees and laboratory fees included range according to classes from $100 to $125. Board and lodging near the college from $3 to $8 per week.

For catalogue apply to David Streett, A.M., M.D., Dean.

BALTIMORE UNIVERSITY SCHOOL OF MEDICINE.

BALTIMORE, MD.

The preliminary course begins September 1. The regular winter course begins October 1.

The curriculum is graded. Attendance upon three winter courses of lectures is required for graduation. In addition to didactic lectures, two hours daily are devoted to clinic instruction. Clinic material abundant. Large hospital and dispensary. Lying-in Department for teaching clinic obstetrics.

Send for catalogue, and address Z. K. Wiley, M.D., Dean.

COLLEGE OF PHYSICIANS AND SURGEONS.

BALTIMORE, MD.

This college is a member of the National Association of Medical Colleges. It requires four sessions of six months each to graduate. The fee is $100, which includes all laboratory and matriculation fees. The clinic work is a special feature in the method of instruction. Small ward classes are formed so that each student can receive personal instruction in the diagnosis and treatment of diseases. The obstetric department affords excellent facilities for every student to learn practically the management of labor cases and all conservative operations. The chemic, histologic, anatomic, pathologic and bacteriologic laboratories are modern and well equipped. The free dispensary in the heart of the city affords an abundance of cases for clinic lectures.

Thomas Opie, M.D., Dean.

JOHNS HOPKINS UNIVERSITY, MEDICAL DEPARTMENT.

BALTIMORE, MD.

The medical department was opened for the instruction of students October, 1893. It has in addition to resources of the Johns Hopkins University and the Johns Hopkins Hospital available for its use a special endowment fund of $500,000. It forms an integral part of the University and is in close affiliation with the Johns Hopkins Hospital.

The requirements for matriculation are higher than those of any other medical school in this country. Those who are admitted as candidates for the degree of doctor of medicine must possess a degree in arts or in science from an approved college or scientific school, and in addition must be able to read French and German and must have had a year's collegiate training with laboratory work in physics, chemistry and biology; or they must furnish evidence by examination that they possess the general education implied by a degree in arts or in science and the knowledge of French, German, physics, chemistry and biology indicated. Men and women are admitted upon the same terms.

The required course of instruction continues through four years, the academic year beginning the first of October and closing the middle of June. The first two years are devoted mainly to anatomy, physiology, physiologic chemistry, pathology, bacteriology and pharmacology, and the last two years to practical medicine and surgery.

Abundant clinic material is afforded by the Johns Hopkins Hospital and Dispensary, this Hospital being unsurpassed by any in the world in the perfection of its arrangements. The clinic amphitheaters and laboratories are in the hospital buildings. Physiology is taught in the biologic laboratory of the University, which is one of the largest and best equipped in this

country. The pathologic laboratory is a four story building on the grounds of the hospital. This building contains the autopsy theaters, the pathologic museum, the bacteriologic laboratory, the physiologic chemic laboratory and rooms for instruction and special work in all departments of pathology.

The charge for tuition is $200 per annum. There are no extra charges for instruction in any department or for laboratory courses.

In addition to the regular course of instruction for undergraduates in medicine, special courses of instruction have been given to physicians in pathology and the clinic subjects since the opening of the Johns Hopkins Hospital in 1889. These are to continue. A fee of $100 covers all of these special courses for physicians. The separate courses can be taken by payment of a fee of $25 or $50 according to the subject chosen.

William H. Welch, M.D., Dean.

UNIVERSITY OF MARYLAND.

BALTIMORE, MD.

The School of Medicine is one of the oldest institutions of medical education in America, ranking fifth in point of age among the medical colleges of the United States. Beginning with the modest number of five graduates, comprising the first graduating class in 1810, the list of graduates in medicine of the University of Maryland now numbers 4,574 names, among which are to be found some of the most noted names connected with the history of medicine in our country. While the policy of the faculty of physic has been one of wise conservatism, it has at the same time never been behindhand in the march of educational progress, and has often been the first and always among the first, in the adoption of measures tending to improvement in methods of medical teaching and to true elevation of the standard of medical education. One of the advantages of the University over other schools of that day was gained in 1823 by the erection of its own hospital, separated from the college by the width of the street and known as the University Hospital. Beside important additions and improvements to the University Hospital, the faculty has in the last few years expended and is now expending large amounts in the establishment and equipment of its lying-in hospital, its laboratories of chemistry, histology, pathology and bacteriology, and is therefore in a position to offer to students of medicine and graduates, a course of combined didactic, clinic and laboratory instruction which will compare favorably with that offered by any medical school in the United States. The course of study embraces three annual graded courses of not less than six months each.

Fees for the three years' graded course: Matriculation (paid each year) $5; practical anatomy (paid two years) $10; full course of lectures (first year) $100; full course of lectures (second year) $100; full course of lectures (third year) $100; graduation fee, $30.

R. D. Cole, M.D., Dean.

WOMAN'S MEDICAL COLLEGE.

BALTIMORE, MD.

The college was incorporated Feb. 14, 1882, being the fourth institution of the kind founded in the United States, and the first in the South. It is managed by twelve trustees, and has thirty-six professors, lecturers and assistants. It requires for graduation attendance upon four annual sessions, lasting each eight months. With reference to entrance requirements it follows the regulations of the American Medical College Association, of which it was one of the founders. It occupies a group of buildings on the corner of Hoffman and McCulloh Streets, two of which it owns. It has laboratories of chemistry, histology, pathology, embryology and bacteriology. One-fourth of the time of lectures is devoted to quizzing. It has a general and also a lying-in hospital of its own. Clinics are also given at the Presbyterian Eye, Ear and Throat, Bayview, and the Hospital for Crippled and Deformed Children, by members of its faculty. It has a large out-door obstetric clinic. Pharmacy is taught and examined upon. There is a course of lectures on psychiatry by a well-known specialist. There is a library and a flourishing medical society of 127 members. The fees are $100 annually; $75 for missionaries; $30 additional for graduation; $5 deposit for breakage. There have been fifty-nine graduates.

I. R. Trimble, M.D., Dean; Eugene F. Cordell, M.D., Secretary.

CLARK UNIVERSITY.

WORCESTER, MASS.

Graduate courses in psychology, physiology, neurology, etc. Special attention given to the study of the brain and central nervous system, with laboratory work and clinics. Exceptional opportunities offered in the sciences underlying the study of medicine.

G. Stanley Hall, M.D., President.

COLLEGE OF PHYSICIANS AND SURGEONS.

BOSTON, MASS.

This college is now entering upon its seventeenth annual course of lectures.

The course is graded and comprises four years of study with four annual courses of lectures. Each course extends from the third Tuesday in September to the third Wednesday in June.

Rules and requirements are those of the Association of American Medical Colleges, of which this college is a member.

A good knowledge of English, Latin, algebra and physics are necessary for matriculates.

Extensive clinic advantages are under its control. The school is now prepared to furnish facilities for chemic, histologic, bacteriologic and other laboratory work. Located near Boston City Hospital, in a part of the city where good board and rooms may be obtained convenient to the college. Women are received and admitted to the same rights and privileges as are accorded to men. Extra advantages for observing clinic and dispensary work.

Matriculation, $5 yearly; lecture fee, $125 per year, or cash in advance for four years, $400; laboratory courses, $5 each; dissecting and operative surgery material at cost.

For catalogue and further particulars apply to the registrar.

Augustus P. Clarke, A.M., M.D. Dean; George F. Shurtleff, M.D., Registrar.

TUFTS COLLEGE MEDICAL SCHOOL.

BOSTON, MASS.

This is the only regular medical school open to both sexes in New England that is recognized by the Massachusetts State Medical Society.

Entrance examination is required, and to students who matriculate for the first time in 1896 four years of attendance.

The course is graded and all the branches of med-

ical science are taught. Abundance of clinic facilities. Fees $115. The regular course of lectures for the session of 1896-97 will commence September 30 and continue for eight months.

For further particulars and catalogues address C. P. Thayer, M.D., Secretary, 74 Boyleston St., Boston, Mass.

Albert Nott, M.D., Dean.

UNIVERSITY OF MICHIGAN.

DEPARTMENT OF MEDICINE AND SURGERY.

ANN ARBOR, MICH.

This school requires for admission a diploma from a first class high school or its equivalent. The course extends through four years with nine months in each session. The first two years are devoted to scientific work, a large part of which is done in the laboratories. The last two years are given to clinic work.

The fees are as follows: Matriculation fee for Michigan students is $10; for all others $25. This fee is paid only once. Annual fee for Michigan students $35; for all others $45. Diploma fee, all alike, $10. The laboratory fees amount to about $50 a year. The total amount of fees paid to the university during the whole four years' course is for Michigan students about $300, and for others about $340.

Victor C. Vaughan, M.D., Dean.

MICHIGAN COLLEGE OF MEDICINE AND SURGERY.

DETROIT, MICH.

The regular term of the college will commence September 23 and will continue six months. The spring term will open April 7 and close June 19.

An addition to the college has been made this term, in the form of a building fifty by sixty feet, to be entirely devoted to the use of the Emergency Hospital Free Dispensary.

The special advantages pertaining to the college are that all lectures and demonstrations are given at the one location, the college building and the Emergency Hospital Free Dispensary, the lying-in clinic, and in fact all the clinics being under one roof.

Send for catalogue to L. E. Maire, M.D., Secretary.

HAMLINE UNIVERSITY.

MEDICAL DEPARTMENT MINNEAPOLIS COLLEGE PHYSICIANS AND SURGEONS.

MINNEAPOLIS, MINN.

This school was organized in 1883 as the Minneapolis College of Physicians and Surgeons, and in 1895 became the Medical Department of Hamline University. The course consists of four years of eight months each and fulfils the requirements of all State boards. The faculty consists of twenty-three professors and eight lecturers, not including demonstrators and assistants. The college building is within five minutes' walk of three leading hospitals and four dispensaries, so that the clinic advantages are excellent. The approaching term begins October 5. The fees are: Matriculation, $5 (payable only once); general ticket, including lectures, demonstrations, etc., $65.

J. W. Macdonald, M.D., Dean.

UNIVERSITY OF MINNESOTA.

COLLEGE OF MEDICINE AND SURGERY.

MINNEAPOLIS, MINN.

The ninth annual course of lectures begins October 1, and continues until the first week in June. Four courses of lectures in different years is required of all applicants for the degree of M.D. All pupils entering this department of the university after 1898 will be required to furnish credentials equal to an "in course" matriculation of the academic department of a recognized college of literature, science or the arts. The State has invested $150,000 in buildings and equipment in the last three years. They are located upon the campus of the general University in Minneapolis. There were 243 matriculants in attendance the last season, 47 receiving the degree of M.D. The department is directly connected with the general University, being amply supported by the State.

Perry H. Millard, M,D., Dean.

BARNES MEDICAL COLLEGE.

ST. LOUIS, MO.

Six months terms; three separate years' graded course. Begins September 21. Matriculation, $5; lecture ticket, $40, and anatomic ticket, $10. Usual laboratory charges. Half rate concessions to physicians' and clergymen's sons and graduates in pharmacy and dentistry. A few $10 scholarships to well attested worthy sons of indigent physicians, widows and others granted on proper presentation of suitable cases.

First course students are required as a precedent for admission to show a good English education by certificate of graduation from a literary college, academy, normal or high school, or of examination approved by the State superintendent of public schools, in English grammar and composition, arithmetic, algebra as far as quadratics, elementary physics, United States history, geography and Latin (equivalent to one year in high school); 80 per cent. grade required in these branches. Previous matriculates at other medical, dental or pharmaceutic colleges and graduates in medicine are exempt from this rule.

Clinical facilities embrace city general hospital, insane hospital, Woman's Hospital and other corporate hospitals, to which members of the faculty have access, and new and enlarged college and dispensary clinics. Thus, while its fees are moderate and concessions to the worthy are liberal, its curriculum and preliminary requirements secure educated classes.

C. H. Hughes, M.D., Dean; Pinckney French, M.D., Secretary.

BEAUMONT HOSPITAL MEDICAL COLLEGE.

ST. LOUIS, MO.

The college will begin the fall session September 22. It gives the three sessions graded course of instruction; maintains a high standard of requirements and has a well-earned reputation for thorough and practical teaching. Its building is well located and arranged and its laboratories are completely equipped with all things necessary for advanced investigation and demonstration. It offers special advantages in clinic teaching, having exclusive control of three large hospitals and two dispensaries, which furnish clinic material in abundance and in great variety. The destruction of the St. Louis City Hospital by the recent cyclone has not materially affected the clinic supply at this institution.

W. B. Outten, M.D., Dean; John T. Larew, M.D., Secretary.

ENSWORTH MEDICAL COLLEGE AND HOSPITAL.

ST. JOSEPH, MO.

The college is an endowed institution, with a full corps of experienced teachers and is properly equipped in its several departments. Its requirements prece-

dent to matriculation are those prescribed by the Association of American Medical Colleges and the State of Missouri. It affords the special advantage of an abundant outdoor clinic during the sessions at the hospital, as well as those afforded by the city hospital and State lunatic asylum. The tuition fee is $50 for each session. In honor of Mr. Ensworth, the school grants a scholarship to each Congressional district of the State. The Ensworth has under its direct control the largest hospital in the Central West.

Thomas H. Doyle, M.D., Dean.

KANSAS CITY MEDICAL COLLEGE.

KANSAS CITY, MO.

This is one of the oldest schools in the West; was established in 1869. The twenty-eighth annual session begins September 15 and continues twenty-six weeks. The course of study is graded and extends over three years. The college building has been enlarged, new laboratories and lecture rooms having been added.

The clinic facilities of the school are large, and practical bedside instruction is a prominent feature. Clinic material is supplied by St. Joseph's, German, Municipal and St. Margaret's Hospitals, supplemented by a large dispensary service, medical, surgical and obstetric.

The annual announcement has been issued and will be forwarded upon request.

J. D. Griffith, M.D., Dean; Franklin E. Murphy, M.D., Secretary.

MARION-SIMS COLLEGE OF MEDICINE.

ST. LOUIS, MO.

The Marion-Sims College of Medicine, which was organized in 1890, has met with much success. This has been due to the untiring energy of the faculty, and to the disposition of its teachers to equip and maintain a medical institution fitted in line with the most advanced methods of medical instruction. A hospital was built by the faculty immediately adjoining the college, which has been a most valuable aid to the instruction in the institution. This hospital, known as the Rebekah Hospital, has afforded a great supply of clinic material. The school is well equipped with appliances of all kinds necessary for instruction in medicine. Its chemic, microscopic and physiologic laboratories are modern and complete. The college dispensary is large. A dental department has been added which bids fair to meet with the same success that the medical department has recived. The length of the course is six months.

The fees are as follows: Matriculation (paid but once), $5; entire lecture (each year), $50; final examination (not returnable), $25; dissecting ticket, $10; single professor's ticket (where the entire course is not taken), $20; general ticket for sons and brothers of physicians and sons of clergymen, $25; lecture fee for three years, including matriculation, dissection and examination ticket, if paid in advance, $150; hospital and clinic tickets free.

H. W. Loeb, M.D., Secretary.

WASHINGTON UNIVERSITY.

MEDICAL DEPARTMENT, ST. LOUIS MEDICAL COLLEGE.

ST. LOUIS, MO.

This institution has had for more than half a century successful annual sessions. It was one of the first among the medical institutions to enforce a graded course and to insist on a three years curriculum (since 1880). Long experience in the advanced methods of teaching enables it to present to the student a well considered and consistent course of study.

Histology, comparative and practical anatomy are demonstrated in a well supplied laboratory and perfect dissecting rooms.

The apparatus and the facilities for experimental and original research in physiology are in charge of a professional physiologist. Biology and pathology have each well supplied laboratories in which practical work is assigned to the individual student. Clinic facilities are abundant and well utilized. For information apply to H. H. Mudd, M.D., Dean, or E. M. Senseney, M.D., Secretary.

MISSOURI MEDICAL COLLEGE.

ST. LOUIS, MO.

The oldest seat of medical learning west of the Mississippi, will enter upon its fifty-sixth year of instruction Sept. 22, 1896. Three graded courses of lectures of six months are necessary for graduation. A high preliminary education, including Latin, is necessary for admission. The fees are $100 a year. Number of students in attendance 240. The number of cases treated during the past year in the two dispensaries conducted by the faculty, and from which clinic material is largely drawn, was 16,389; operations performed 1,084. The St. Johns, the Polyclinic and the Bethesda Hospitals are under the exclusive control of the faculty, besides clinics are given in the city and other hospitals attended by the professors. The museum is very large and rich, and the laboratory equipments rarely excelled. P. G. Robinson, M.D., Dean; H. M. Whelpley, M.D., Secretary.

ST. LOUIS COLLEGE OF PHYSICIANS AND SURGEONS.

ST. LOUIS, MO.

It is one of the three oldest medical colleges in St. Louis. The Preliminary Session begins Tuesday, September 1. Regular Session, Tuesday September 8, closing Wednesday March 17. The faculty numbers eighteen professors ably assisted by a corps of competent lecturers and demonstrators.

In the new building the laboratory and clinic equipment is complete. The surgical amphitheater is supplied with all the latest improved appurtenances to that line to work and nowhere in this section of the country can better surgical opportunities be found; material being drawn from the Merchants and Mechanics Hospital, St. Louis Baptist Hospital, City and Female Hospitals, City Insane Asylum and Poor House.

Fees are extremely moderate for the high grade of instruction offered; matriculation $5, general lecture ticket, $50. To sons and brothers of physicians and sons of the clergy $25. Special terms to graduates in pharmacy and dentistry. Write for catalogue to Dr. Waldo Briggs, Dean.

UNIVERSITY MEDICAL COLLEGE.

KANSAS CITY, MO.

It requires of the student, before entering the college that he be either a graduate of a reputable literary college or, upon examination, show that he has a good English education and sufficient knowledge of Latin to translate and define medical terms; that he read one year under a preceptor, to the extent of having read the text-books of medicine; that he shall attend 80 per cent. of the lectures and clinics of a

three years' graded course of six months each before applying for graduation.

The college building is large and has seating capacity for 500 students. It has ample room for its chemic, bacteriologic, histologic and pathologic laboratories, which are all abundantly supplied with all the appurtenances for thorough teaching. It has a large corps of didactic and clinic instructors.

Its resources for clinic material are excellent. All Saints Hospital in the same block is under its control, where a school for trained nurses is taught. At its free dispensary in 1895 there were forty thousand patients treated distributed among the different departments. This dispensary runs all the year to which students have free access, and three or four hours daily (except Sunday) is devoted to clinic teaching by the professors. In its obstetric clinic there were 324 cases of obstetrics furnished during the sessions of 1895 and 1896. It has access where clinics are held at All Saints Hospital and the seven other hospitals in Kansas City. Matriculation fee $5.00. Lecture tickets first and second years $60 each, third year $50. Examination for graduation $20.

James P. Jackson, M.D., Dean.

UNIVERSITY OF THE STATE OF MISSOURI, COLLEGE OF MEDICINE.

COLUMBIA, MO.

Organized in 1872.

Students must pass in the work of each class and year before admission to the next class or year.

Instruction is given by lectures, recitations, clinic teaching and laboratory work.

The length of the session, nine months, renders it practicable to distribute the different branches among the teachers in the most satisfactory manner, and in their natural order and succession. The student is thoroughly drilled each day by examinations upon the lectures of the previous day, and by recitations from text books.

The students are taught the use of the microscope, in relation to both pathologic and physiologic studies. The methods of bacteriologic investigation are taught by practical work in the laboratory.

Among the advantages offered by this school is the privilege granted, without further cost, to all students who enter the medical department, of pursuing such studies as they may desire in the academic course. Academic students may take anatomy and physiology in the first year of the medical course, preparatory to entering on the full medical course after graduating in arts or science. Such students are admitted to the second year's medical class.

Conditions of admission: Candidates for admission to the medical department must possess a good common school education. This is the minimum requirement, and evidence that the candidate possesses the requisite knowledge must be attested by certificates of former instructors or must be shown by examinations conducted by the Faculty.

Fees: First year matriculation, $20; second year matriculation, $50; third year matriculation, $50.

A preliminary course of nine months will be given in chemistry, biology, physics and Latin.

A. W. McAlester, Dean. Woodson Moss, Secretary.

JOHN A. CREIGHTON MEDICAL COLLEGE.

OMAHA, NEB.

The curriculum of this school is graded, and attendance upon four annual terms, of seven months each, is required. Instruction is carried on by means of lectures, recitations, laboratory work and clinics. The laboratories for chemistry, physiology, histology, pathology and bacteriology are very large, well lighted and well equipped for the teaching of these branches in a thorough and modern manner. The dispensary and hospital clinics furnish ample material for clinic instruction in all branches. The St. Joseph's Hospital, a magnificent structure, of three hundred beds, is under the exclusive control of the faculty of this college. The new college building, nearly completed, is one of the very best in the West.

D. C. Bryant, M. D., Secretary.

OMAHA MEDICAL COLLEGE, MEDICAL DEPARMENT UNIVERSITY OF OMAHA.

OMAHA, NEB.

The curriculum is graded and divided into four annual courses of seven months each.

Preliminary examination is required of all applicants for entrance not in possession of literary credentials outlined by the Association of American Medical Colleges.

The college building is new and contains an outdoor dispensary, two large lecture halls, museum and laboratories of anatomy, physiology, pathology, histology and chemistry. The laboratory equipment is sufficient for a class of two hundred students.

Instruction is given by means of recitations, class room work, demonstration, lectures and clinics.

Clinics in all branches are furnished by a large outdoor dispensary, the Omaha. Presbyterian, Douglas County, Immanuel and Clarkson Hospitals.

Graduation requirements in compliance with the rules of the American Medical College Association. Fees for each session $70.

W. O. Bridges, M. D., Secretary.

DARTMOUTH MEDICAL COLLEGE.

HANOVER, N. H.

The plan of teaching in this college includes a term of lectures with quizzes, from the middle of July to last of November, and a term of recitations and laboratory work from January 1 to June 20 each year. The Hitchcock Hospital affords excellent facilities for clinic instruction. The fee for the lecture course is $82; for recitation term, $40.

Entrance examinations in English, Latin, elementary physics and chemistry are required unless candidates have already properly performed the work.

Ten months' attendance in this school each year for three years, or three full courses of lectures and four years of study under a preceptor are required for graduation. They must pass written examinations in anatomy, chemistry, physiology, surgery, practice, obstetrics, gynecology and therapeutics.

O. P. Frost, M. D., Dean.

ALBANY MEDICAL COLLEGE, MEDICAL DEPARTMENT OF UNION UNIVERSITY.

ALBANY, N. Y.

Three years graded course which will be increased to four with session of 1897–98. Hospital and clinic advantages excellent, clinics being held in Albany, St. Peters, Child's and County Hospitals and Eye and Ear Infirmary. With the coming session the new Bender Hygienic Laboratory, for the study of pathology and microscopic work, will be opened to students. Fees: Matriculation, each year, $5; each lecture course, $100; dissection, chemic, histologic and pathologic laboratories, each $10.

For catalogue and further information, address, Willis G. Tucker, M.D., Registrar.

BELLEVUE HOSPITAL MEDICAL COLLEGE.

NEW YORK.

The Collegiate year embraces a winter session and a spring session. The winter session for 1896–97 will begin Sept. 21, 1896, and continue for twenty-six weeks.

The recitations, lectures and clinics for the spring session will begin March 22, 1897, and continue for twelve weeks. Attendance on the winter session only is required for graduation.

New matriculates for the session of 1897–98 and thereafter will be required to present tickets showing attendance on four regular courses of lectures and certificates of four years' study of medicine as conditions for graduation.

Students who attend the regular session of 1896–97 or have attended one or more regular sessions at the Bellevue Hospital Medical College before 1896–97 may complete their courses in accordance with the present requirement of three years.

RESOURCES FOR CLINIC INSTRUCTION.

Bellevue Hospital receives annually between five and six thousand patients. Medical and surgical cases of all kinds are admitted except cases of contagious diseases.

The City Hospital on Blackwell's Island receives annually between eight and ten thousand patients. A considerable number of the patients admitted into this hospital are affected with venereal diseases.

The Bureau of Medical and Surgical Relief for out-door poor is in the college building and furnishes most of the cases for the clinics held in the college lecture room. The number of new patients treated in this department in 1895 was 47,479.

FEES AND REGULATIONS FOR THE THREE YEARS' COURSE.

The matriculation fee, to be paid before any other tickets are issued, is $5 for each year. The fee for each one of the three courses required and for each additional course is $150. The fee for dissections, to be taken during the first and second years, is $10 for each year. The fee for the regular laboratory courses, to be taken during the third year is $20. The fee for specimens mounted in connection with the Carnegie Laboratory course is $2. The fee for the examinations at the end of the second year is $15. The fee for the final examinations is $15. The fee for final examinations for those who have taken their first two courses at other colleges is $30.

Communications relating to the business of the college should be addressed to Prof. Austin Flint, Secretary.

LONG ISLAND COLLEGE HOSPITAL.

BROOKLYN, N. Y.

The regular term of 1896–97 will begin Sept. 28, 1896, and continue until March 31, 1897. The reading term will begin April 1, 1897, and continue until June 18.

Beginning with the regular term of 1897–98, the course of instruction will be more thoroughly graded and will consist of four collegiate years of eight months each. The reading and recitation term will be abolished as separate terms after 1897 and merged into the regular term.

Through the munificence of Mrs. C. H. Polhemus of Brooklyn, a magnificent building is now being erected as a memorial to her husband. This building will be occupied by the dispensary and college, and will cover an area of 67 x 92 feet, and be 115 feet in height. The instructions of the donor to the architect are to make it the most perfect building of its kind that money and skill can construct. It will be completed in June, 1897, and ready for the opening of the collegiate year 1897–98.

The success of the plan of the Long Island College Hospital depends mainly on two important facts:

1. The hospital and dispensary, in which 21,485 patients were treated in 1895, are under the immediate control of the Regents, and are therefore, available at all times for practical instruction.

2. The courses of instruction are given in the hospital buildings, so that the student, without loss of time, is brought in direct contact with patients, not only in the amphitheater, but also in the wards of the hospital.

The city of Brooklyn contains more than 1,000,000 inhabitants, being the fourth city in the United States in point of population.

The fee for the regular term is $125. Board can be obtained at $5 a week.

J. H. Raymond, M.D., Secretary.

NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL.

NEW YORK CITY.

The winter session of the Polyclinic opens Sept. 15, 1896, and will continue to June 15, 1897. The sessions of the school, however, are continued throughout the year, the summer session being from June 15 to September 15.

It is a school of clinic medicine and surgery for practitioners only. No didactic lectures are given. The clinics are held in the lecture rooms of the school and in the operating rooms of its hospital.

The operations done here embrace every variety of surgical work not only in general surgery but also operative treatment in the special branches of the eye, ear, throat, gynecology, etc. An immense amount of clinic material is supplied from the dispensary which is submitted to the members of the class at specified hours for personal examination and study under the guidance of the various teachers.

Operative courses upon the cadaver in the different departments are also given.

A general ticket admitting the holder to *all the lectures and operations* is issued: Twelve months, $350; six months, $250; three months, $150; six weeks, $100.

For further information address J. Riddle Goffe, M.D., Secretary.

NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.

NEW YORK CITY.

The New York Post-Graduate Medical School and Hospital has just entered upon its fifteenth winter session. Five hundred and forty-two physicians from all over this continent have attended the courses at the institution during the past year. More than one thousand operations were performed in the hospital, which is one of the largest in the city, containing special wards for babies and children, while nearly twenty thousand patients were treated in the out-door department. Recent discoveries have revolutionized medical and surgical methods and a man whose medical education ended fifteen years ago is not a phy-

sician or surgeon within the present meaning of the term. Post-graduate medical instruction is for the purpose of furnishing to these graduates in medicine a means of refreshing their knowledge. It supplies them with the opportunity of coming in direct contact with disease by means of the special courses we give in all departments of medicine.

D. B. St. John Roosa, M.D., LL.D., President.

NIAGARA UNIVERSITY.

MEDICAL DEPARTMENT.

BUFFALO, N. Y.

The medical department was organized in 1883, with the motto "Higher Medical Education."

Requirements for matriculation are an equivalent knowledge of Latin as found in Arnold's "First Latin Book," in addition to the State Board of Regents' certificate, which can be obtained by all graduates of any registered high school in the country, or the equivalent obtained in foreign countries.

Duration of course is from October 1, 1896, four years. Matriculants prior to this time are allowed to graduate in three years under certain conditions.

Free scholarship is obtained by competitive examination in higher mathematics and Latin.

Fees: General course of instruction, annually, $75; registration fee each year, $5; perpetual ticket, $200; laboratory fees reasonable.

The clinic resources embrace: Buffalo Hospital of the Sisters of Charity (bedside instruction), Emergency Hospital, Buffalo Woman's Hospital, Buffalo State Hospital, Providence Retreat, St. Francis Hospital, Edward Street Lying-in Asylum (150 confinements yearly average), Edward Street Infant Asylum, The Erie County Hospital, Charity Eye, Ear and Throat Hospital, Buffalo German Orphan Asylum, The College Dispensary, Nose and Throat Department of the Buffalo Eye and Ear Infirmary.

Lectures begin Oct. 1, 1896; examinations close May 6, 1897; commencement exercises May 12, 1897.

President, John Cronyn, B.A., M.D., PH.D., LL.D.
Secretary, Harry A. Wood, M.D.

UNIVERSITY OF BUFFALO MEDICAL DEPARTMENT.

BUFFALO, N. Y.

The fifty-first regular session opens September 24, and continues thirty weeks. The lectures will be held in the large, new, three-story building, containing three ampitheaters and rooms for dispensary patients, chemic, pathologic, histologic, and pharmaceutic laboratories, thoroughly equipped with modern conveniences. Instruction by lectures, recitations, laboratory work, and clinics. Clinic advantages unexcelled.

Fees: Matriculation, $5; regular term, $100; perpetual ticket, $200; laboratory, $40; dissection, $20, ($10 each year); examination fee, $30 ($10 each year). For further particulars address,

John Parmenter, M.D, Secretary.

COLLEGE OF MEDICINE, SYRACUSE UNIVERSITY.

SYRACUSE, N. Y.

This college will hereafter occupy its new four-story building, which contains nine commodious, thoroughly equipped laboratories and lecture rooms. For clinic teaching it has the use of two hospitals, a dispensary and a State Asylum.

The college year begins the first Tuesday in October, and ends the second Tuesday in June. Entrance examinations, which must be passed unconditionally, will be held at the college, October 6, at 2 o'clock, P. M.

Fees and expenses, including lectures, laboratory work, clinics, use of library, microscopes and other apparatus, examinations and graduation, $125, annually, payable in advance. Rooms and board can be obtained on very reasonable terms.

It may be remembered that for twenty years, commencing sixteen years before State legislation compulsion secured uniformity in the length of courses, this college has maintained a three years' graded course. It was the first in the State, and the third in the United States to adopt this system of higher medical education, and it has already adopted the four years' course.

Ninety-two per cent. of its graduates have passed successfully the State Regents' licensing examination.

For announcements and other information, address, H. D. Didama, Dean, or D. M. Totman, Registrar.

UNIVERSITY OF THE CITY OF NEW YORK, MEDICAL DEPARTMENT.

Fifty-sixth year. The session will begin in October. Attention is called to the fact that the curriculum has been entirely remodeled and greatly improved.

Special clinics: Ophthalmology, otology, laryngology, orthopedy, pediatrics, skin diseases, venereal diseases, nervous diseases.

Examinations are held at the close of each year. The marks received for proficiency in practical work in the laboratory, dissecting room, etc., are added to the final examination marks in each corresponding subject.

The college possesses a corps of sixty-four professors and instructors in its various departments; and in addition to well-equipped laboratories and a dispensary where 20,000 visits are annually paid, it offers to students exceptional facilities for practical instruction at the bedside in Bellevue Hospital, which is directly opposite the college buildings.

Fees; For course of lectures, $150; matriculation, $5; demonstrators' fee, including material for dissection, $10; final examination fee, $30.

For further particulars and circulars, address the Dean, Prof. Chas. Inslee Pardee.

WOMAN'S MEDICAL COLLEGE OF THE NEW YORK INFIRMARY.

NEW YORK CITY.

The college gives a graded course of four years. The building is new and convenient. It has excellent dissecting rooms, well equipped laboratories for practical instruction in chemistry, histology and pathologic anatomy, a reading room and library. The college adjoins the infirmary of sixty beds, and the dispensary in which over 7,000 patients are treated annually. These and a large out-practice are utilized fully for clinic instruction. Besides the daily college classes, the senior students receive daily clinic instruction in small groups. Special clinic courses are given for them in Bellevue Hospital, the Blackwell Island Hospital for the Insane, and the Willard Parker Hospital for Contagious Diseases. Every student attends ten cases of obstetrics under direction. Students can attend operations and clinics in several of the city hospitals.

Fees for course of four years, $515. Dr. Emily Blackwell, Dean.

LEONARD MEDICAL SCHOOL.

(SHAW UNIVERSITY.)

RALEIGH, N. C.

Sixteenth annual announcement. Next session opens

November 2. Length of session twenty weeks; minimum expense for the year for board, room-rent, fees, books, etc., $70.

We do not claim the Leonard Medical School is the best in the world, but we do claim, and justly, that young men who graduate from the four years' course of the Leonard Medical School are equipped as few institutions equip them, to successfully practice their profession, and that this is done at a phenomenally small outlay of money on the part of the students.

A hospital building has been erected and will be used during the term for affording the students the best possible clinic instruction.

For catalogue and full information write to Chas. F. Meserve, President.

NORTH CAROLINA MEDICAL COLLEGE.

DAVIDSON, N. C.

This college has a nominal connection with Davidson College and has the advantage of the scientific equipment of this old institution. The chemic and electric departments are unusually well furnished.

A new laboratory is to be equipped this Fall. In the department of pathology and bacteriology, there is, in process of erection, a new brick and granite building to be used for class work and hospital purposes.

Length of session eight months, three of such sessions constituting a complete course, leading to graduation.

Matriculation fee, $5; tuition, $75; board and lodging $10 to $15 per month.

J. P. Munroe, M.D., President.

CINCINNATI COLLEGE OF MEDICINE AND SURGERY.

CINCINNATI, OHIO.

The forty-sixth year of college instruction begins Oct. 1, 1896, and continues until April 14, 1897. It has a faculty of twelve professors, four demonstrators, and nineteen assistants. The course of study, requirements for admission, advanced standing, and graduation are those indicated by the American Medical College Association, of which organization this school is one of the original members.

Facilities for didactic instruction, clinic observation and laboratory work are in accord with the best medical schools of this country. The college is coeducational for the sexes, sitting and study rooms are conveniently arranged.

The hospital advantages afforded medical students in Cincinnati are unexcelled. Nearly every professor in the Cincinnati College of Medicine and Surgery holds a hospital staff position.

S. C. Ayers, A.M., M.D., Dean; W. E. Lewis, M.D., Secretary.

CLEVELAND COLLEGE OF PHYSICIANS AND SURGEONS.

MEDICAL DEPARTMENT OF THE OHIO WESLEYAN UNIVERSITY, CLEVELAND, OHIO.

Formerly Medical Department of the University of Wooster.

The course of instruction is four years with terms of eight months each. The fees are $100 for each separate year for general and hospital ticket. Matriculation and examination fee $10 annually extra. In addition thereto a laboratory deposit of $20 is charged to cover cost of material, a portion of which is returnable to the student in case material to that amount is not used.

The first two years of instruction in this school is devoted entirely to the primary branches, much of which is taught by the laboratory method, requiring of the student individual work. The last two years are largely clinic, the student spending most of his time at the Cleveland General Hospital, the medical management and direction of which is exclusively under the faculty.

It will be observed from the foregoing statement that the first two years of student life are devoted to such work as will fit him for a clear comprehension of the advanced work, and that the last two years are eminently practical, fitting him especially for assuming the duties of active professional life.

H. W. Rogers, M.D., Secretary.

LAURA MEMORIAL WOMAN'S MEDICAL COLLEGE.

CINCINNATI OHIO.

With the session of 1895-96, the college adopted the four-years' graded course.

The sessions are of seven months each, beginning the last Tuesday in September, and ending the last Thursday in April. The college with the hospital adjoining. is complete in all departments, the laboratories being newly and fully equipped. The clinic advantages include the large and varied clinics of the Cincinnati Hospital, the Presbyterian Hospital, the College dispensary, the eye clinics in Prof. Holmes' Ophthalmic Hospital, and the obstetrical cases of the Maternity Society, under Prof. Stewart.

The fees are: Matriculation $5; general fee (paid annually) $50; the practical anatomy and laboratory fees $10 each; Cincinnati Hospital ticket (for third and fourth years' classes) $5; graduation fee $25.

J. M. Withrow, M.D., Dean.

S. E. Allen, M.D., Secretary.

MEDICAL COLLEGE OF OHIO.

CINCINNATI, OHIO.

The Medical College of Ohio, now the Medical Department of the University of Cincinnati, is the oldest medical school west of the Alleghenies, having been founded in 1819. Four courses of lectures are required. Fees $100 per annum. With the beginning of the session of 1896-97 the college will be in its new location on McMicken Avenue, and in newly erected buildings. Its chemic, histologic, pathologic and bacteriologic laboratories are newly and thoroughly equipped. The large college dispensary with the Cinncinati Good Samaritan and Ohio Maternity Hospitals afford abundant clinic material.

Jas. G. Hyndman, M.D., Secretary; W. W. Seely, A.M., M.D., Dean.

MIAMI MEDICAL COLLEGE.

CINCINNATI, OHIO.

It requires the four-years' graded course. The session begins Oct. 1, and ends April 1. The fees are, matriculation $5; tuition (annually) $100. This includes all laboratory tickets and dissections. Graduation $25; hospital ticket $5.

In addition to the regular didactic and laboratory courses exceptional clinic advantages are possessed. The Ophthalmic Hospital building has been leased for the daily out-door college clinics, which have an average daily attendance of 200 cases, and ten members of the faculty give bedside instruction in the wards of the Cincinnati Hospital in medicine, surgery, obstetrics, gynecology, ophthalmology and otology in addition to the clinic lectures given in the amphitheater of that institution. This hospital admits 5,300 cases yearly, is within half a block of the college,

and the college hours accommodate themselves to the hospital clinics.

N. P. Dandridge, M.D., Dean.

OHIO MEDICAL UNIVERSITY.

COLUMBUS, OHIO.

The University comprises the departments of medicine, dentistry, pharmacy and midwifery; each department having its own faculty and separate apartments for general class work.

The main building is a fine structure, specially planned and erected for University purposes. A new four-story building is used solely for laboratory purposes. There are two amphitheaters, ten recitation rooms, twelve laboratories, dental operating rooms, library, museum, and free dispensary rooms.

The plan of instruction is by assigned topics and recitations and clinic lectures. Hospital facilities are provided by the Protestant and University Hospitals, which place all their clinic material at the disposal of the University staff for the purposes of clinic instruction, the Ohio Penitentiary, the Columbus State Hospital and free Dispensary.

The combined Faculty consists of fifty-four professors, instructors and adjuncts.

Length of term, seven months; fees $50 in each department. Medical department, member of National Association of American Medical Colleges. Dental department has been recommended by the council of National Association of Dental Faculties for membership.

The University has adopted the *four-years' course*, giving separate instruction in each year.

G. M. Waters, A.M., M.D., Dean; J. U. Barnhill, A.M., M.D., Secretary.

STARLING MEDICAL COLLEGE.

COLUMBUS, OHIO.

The fiftieth annual session of Starling Medical College, Columbus, Ohio, opened on August 19, 1894. The college is one of the oldest in the State, and has a fine building, with all the modern equipments. Its hospital facilities are of the best, material being supplied from the two largest hospitals in the city, one being in the college building. Students are required to study cases at the bedside, and instructed in physical diagnosis.

Information as to terms can be had by addressing Thos. C. Hoover, M.D., Registrar.

TOLEDO MEDICAL COLLEGE.

TOLEDO, OHIO.

The sixteenth annual session will begin October 1, in its splendidly equipped new college building, and continue six months. The school requires four years' attendance for graduation. The clinic facilities are excellent. There is no other medical college in the city, and it has the active support of the profession, not only of the city, but of the northern part of the State. It has the entire material furnished by two large general and one lying-in hospital. The fees are as follows:

Matriculation, to be paid but once, $5; professors' tickets, for each session, $50; practical anatomy ticket, including material, each course, $10; chemic laboratory, $5; microscopy and bacteriologic laboratory, $10; hospital tickets (obligatory), $5; graduation fee, $25.

For $175 paid in advance, a perpetual ticket (not transferable) will be issued, which will entitle the holder to attend four or more courses of regular lectures.

J. H. Pooley, M. D., Dean. Wm. J. Gillette, M.D., Secretary.

WESTERN RESERVE UNIVERSITY, MEDICAL DEPARTMENT.

CLEVELAND, OHIO.

Presents a three-years' graded course, each year a term of eight months. Instruction by recitations, lectures, clinics, quizzes and practical training. Ample laboratory, dispensary and hospital facilities and equipments are provided for all students. Tickets for year, $100; tickets for whole course, $250. Special courses as desired, and advanced students given standing according to assured acquirements. Year begins middle of September.

G. C. Ashmun, M. D., Registrar.

UNIVERSITY OF OREGON, MEDICAL DEPARTMENT.

PORTLAND, ORE.

The medical department of the University of Oregon is located at Portland, Oregon, a city of nearly 100,000 inhabitants, where the excellent facilities afforded by Good Samaritan, St. Vincent's and Multnomah County Hospitals offer advantages for clinic instruction equal to those of many cities of much larger size because of the very large extent of territory from which patients are drawn. This school is a member of the Association of American Medical Colleges, requires advanced matriculation examination, four courses of lectures of six months each, practical work in clinics, anatomy, chemistry, bacteriology, etc. Its courses are graded, examinations being held at end of each year for advanced grading. Fees are graded according to time of attendance: Matriculation, $5; first year, $130; second year, $130; third year, $100; fourth year, free; examination fee, $30.

S. E. Josephi, M. D., Dean.

Curtis C. Strong, M. D., Secretary.

WILLAMETTE UNIVERSITY OF OREGON, MEDICAL DEPARTMENT.

SALEM, ORE.

This college is permanently located at the capital of the State, and is now entering upon its thirty-first year. The course of instruction continues through four years, in accordance with the highest and best standard of modern advancement.

The regular course of instruction will begin September 29, 1896, and continue six months. The school is conducted in entire harmony with the Association of American Medical Colleges, adhering strictly to the requirements of that association.

Fees: First year, matriculation, $5; lectures, $130; second year, lectures, $130; third year, lectures, $100; fourth year, lectures, $20; examination fee, $30. The medical faculty of the college have entire and exclusive control of the Salem Hospital, insuring to the students all clinic advantages that can reasonably be procured from such sources.

J. Reynolds, M. D., Dean.

W. H. Byrd, M. D., Secretary.

UNIVERSITY OF PENNSYLVANIA, DEPARTMENT OF MEDICINE.

PHILADELPHIA, PA.

Founded in 1765. The course of instruction extends over four years, with one session beginning October 1 and ending on the second Thursday of

June in each year. The tuition fee admitting the student to all the lectures and including all the laboratory work, dissection, etc., is $200 per annum. The instruction is conducted in the Medical Hall, the Laboratory Building, the Hospital of the University, Maternity Pavilions, Wistar Institute of Anatomy and Biology, and the Laboratory of Hygiene. Practical work in the various laboratories is part of the curriculum and is required of every student. Attendance on the clinic instruction given in the amphitheater as well as bedside instruction in the wards of the University Hospital is a part of the daily duty of the students.

John Marshall, M. D., Dean.

JEFFERSON MEDICAL COLLEGE.

PHILADELPHIA, PA.

A graded four years' curriculum in college is required of those who take the medical degree.

The matriculation fee is paid but once; the annual ticket is $150; no diploma fee.

Beside the medical hall and the old laboratory building, this fall there will be opened the new pathologic and bacteriologic laboratories equipped at heavy outlay. The college hospital provides a wealth of clinic material unequaled in America. It has 140 beds and in the out-patient departments over 300 cases are treated daily. In the maternity department there were 159 obstetric cases and 2,385 visits. Each student had bedside instruction in midwifery. With these facilities it is possible to train the student in all the branches of medicine.

J. W. Holland, M.D., Dean.

MEDICO-CHIRURGICAL COLLEGE.

PHILADELPHIA, PA.

The session at the college opens October 1, and continues until April 26, when examinations begin. It contains laboratories for physiology, chemistry, pathology, hygiene, experimental therapeutics, histology and pharmacy.

Free quizzing at this college is one of its characteristics. Quizzing is done by the professors and instructors.

Its course consists of three years and is of a very practical nature. During the coming session it will have a new clinic amphitheater with a seating capacity of 600. It equals if not surpasses any clinic amphitheater now in existence in its arrangement so as to meet the demands of modern efficient clinic teaching.

The new hospital contains 150 beds. The fees for the tickets are $120 for each year.

All communications should be addressed to Isaac Ott, M.D., Dean, Medico-Chirurgical College, Philadelphia.

PHILADELPHIA POLYCLINIC AND COLLEGE FOR GRADUATES IN MEDICINE.

PHILADELPHIA, PA.

It was organized in 1882 to give practical instruction to graduates only. It has a Faculty of thirty-two professors, assisted by forty-four lecturers, adjunct professors and instructors.

The hospital is fully equipped for purposes of treatment and teaching. There are two dispensary floors, clinic amphitheater, operating and sterilizing suites. There is a five-story laboratory building connected with the hospital, containing necropsy and dissecting rooms, surgical, chemic, pathologic, bacteriologic and neurologic laboratories, all of which are fully equipped with the latest improved apparatus and offer every facility for original research.

Courses may begin at any date. The situation of the hospital is almost equi-distant from the University of Pennsylvania, the Jefferson Medical College, and the Medico-Chirurgical College, and near to the Children's, Rush Consumption, Wills Eye and Orthopedic Hospitals

A general ticket entitling the student to attend all the clinic departments is issued for one week at $20, six weeks for $90, three months for $150, and one year for $350. In all cases an extra fee is charged for any laboratory course.

S. Solis-Cohen, M.D., President. Max J. Stern, M.D., Secretary.

WESTERN PENNSYLVANIA MEDICAL COLLEGE.

PITTSBURG, PA.

The regular session begins third Tuesday in September and continues six months. During this session, in addition to four didactic lectures, two or three hours are daily allotted to clinic instruction. Attendance upon four regular courses of lectures is requisite for graduation. A four years' graded course is provided. The spring session embraces recitations, clinic lectures and exercises, and didactic lectures on special subjects; this session begins the second Tuesday in April and continues ten weeks.

The laboratories are open during the collegiate year for instruction in chemistry, microscopy, practical demonstrations in medical and surgical pathology, and lessons in normal histology. Special importance attaches to "the superior clinic advantages possessed by this college."

For particulars address Prof. T. M. T. McKennan, Secretary.

WOMAN'S MEDICAL COLLEGE OF PENNSYLVANIA.

PHILADELPHIA, PA.

The course is four years with an entrance examination in English, physics, arithmetic and Latin. The following laboratories furnish thorough practical instruction: histologic and embryologic, chemic, physiologic, anatomic, bacteriologic, pathologic and pharmaceutic. The instruction in hygiene is supplemented by laboratory work and there is a department for attendance on cases of confinement. Bedside instruction to small sections of the class is given by the physician in charge of the Woman's Hospital and clinic professors and instructors in this and other hospitals. The total expenses including the graduation fee are $516.

For further information address Dr. Ruth Webster Lathrop, Sub-Dean, Philadelphia, Pa.

MEDICAL COLLEGE OF SOUTH CAROLINA.

CHARLESTON, S. C.

Three years' graded course; good hospital advantages; well equipped chemic, pathologic and bacteriologic laboratories; modern dissecting room; excellent teaching facilities and ample clinic material. Every facility afforded for a thorough course of instruction by lectures, demonstrations, quizzes, laboratory work and frequent clinic. Lectures begin Oct. 6, 1896. Commencement exercises April 1, 1897.

Fees: First year matriculation $5, lectures $100, laboratory fee $5; second year lectures $100, laboratory fee $5; third year lectures $80, laboratory fee $5. No further charge for dissecting and hospital ticket, or diploma fee.

College of Pharmacy two years' course, fees, first year $45; second year $80. Women admitted to medical and pharmaceutic courses. For catalogue and other information address Francis L. Parker, M.D., Dean.

CHATTANOOGA MEDICAL COLLEGE.

MEDICAL DEPARTMENT OF GRANT UNIVERSITY.

Splendid new college building, largest and most elaborate in the entire South, into which the school has just moved prior to opening its eighth annual session.

Six hospital laboratories, abundant material for dissection and excellent general equipment. Six months' term and three years' graded course. Requirements those of the Southern Medical College Association. Tuition fees average about $93 per annum. Large faculty covering every separate branch of medical instruction. Practical teaching and personal drill are special features. Climate delightful, board cheap, scenery picturesque, city healthy—a resort for invalids from everywhere, and shows lowest mortality of any neighboring city.

E. A. Cobleigh, M.D., Dean; J. R. Rathmell, Secretary.

MEDICAL DEPARTMENT UNIVERSITY OF TENNESSEE.

NASHVILLE, TENN.

The Medical Department of the University of Tennessee was founded as the Nashville Medical College in 1876 and became in 1879 connected with the University of Tennessee. The curriculum of study extends over three courses of lectures with special laboratory courses. It has now connected with it thirteen professors, nine instructors and six demonstrators. Among its professors may be mentioned Prof. Paul F. Eve and W. K. Bowling. Its sessions occur from October through March of each year.

Paul F. Eve, M.D., Dean.

MEMPHIS HOSPITAL MEDICAL COLLEGE.

MEMPHIS, TENN.

It is a member of the Southern Medical College Association, three terms of six months each being required for graduation. The school enjoys excellent clinic advantages with material obtained from the city hospital, St. Joseph's Hospital and its own free dispensary, where several thousand applicants receive treatment yearly. The college is well equipped with laboratories for microscopic and chemic work under the charge of a corps of experienced instructors. The Faculty is composed of some of the ablest men in the South, all being men of large experience in the teaching of their general branches. The fees for instruction are $75 per course; graduation fee $25, returnable in case applicant fail or does not apply for examination.

W. B. Rogers, M.D., Dean.

SEWANEE MEDICAL COLLEGE, UNIVERSITY OF THE SOUTH.

SEWANEE, TENN.

The college is now in session, with a fair class. Its regular course opens about July 1, and continues six months.

The pride of the school consists in its thorough course in the principles of the various departments of medicine and its excellent laboratory facilities.

It is a member of and governed by the laws of the "Southern Medical College Association" except in requirements for matriculation; its standard is with the highest.

It has been demonstrated that the summer and fall seasons in this elevated mountain retreat, offer rare facilities for the successful study of medicine.

The expenses of attending the school are quite moderate.

J. S. Cain, M.D., Dean.

TENNESSEE MEDICAL COLLEGE.

KNOXVILLE, TENN.

Was one of the first in the South to extend the regular course to six months, and to require attendance upon three courses of lectures as an essential for graduation; its great success is a source of special satisfaction to the friends of the school. Knoxville, with its suburbs, has about 50,000 inhabitants.

A hospital on the college grounds, costing $30,000, was completed in 1895. Fees for each course $65, or for the three courses a perpetual ticket is provided at a cost of $150. This includes everything except graduation fee of $25.

J. C. Cawood, M.D., Dean.

UNIVERSITY COLLEGE OF MEDICINE.

RICHMOND, VA.

The University College of Medicine was organized and chartered with the three independent departments of medicine, dentistry and pharmacy, Dr. Hunter McGuire President of the combined faculties.

The course of study comprises three sessions of seven months each. Tuition fees $100 with no extras. The professors and instructors number forty-eight and constitute the medical and surgical staff of the Virginia Hospital and Richmond Eye, Ear and Throat Infirmary. Students also have the clinic advantages of the City Almshouse Hospital. The arrangements for obstetric service are ample, and every student receives personal instruction in all the clinics.

The college buildings are large and were erected for their special purposes, containing fifteen separate apartments designed to meet the requirements of didactic instruction with practical laboratory work so essential to a modern scientific training.

There were 239 matriculates during the last session

Hunter McGuire, M.D., LL.D., President.

Paulus A. Irving, M.D., Secretary.

THE UNIVERSITY OF VIRGINIA, MEDICAL DEPARTMENT.

CHARLOTTESVILLE, VA.

The session begins the 15th of September and continues without intermission for nine months. The course is graded and extends over three years, chemistry, histology, bacteriology, and human anatomy being taken up for the first session; physiology, pathology, materia medica, and obstetrics for the second; and the remaining studies in the medical curriculum for the third. Optional courses are also offered in embryology, practical pharmacy, and toxicology.

The University fees including tuition, matriculation, laboratory and diploma fees are for the first year $160, for the second year $140, and for the third year $100. These cover all charges for anatomic and laboratory materials.

The characteristic features of the school are the extreme thoroughness of the teaching, the ample practical courses in human anatomy, histology and bacteriology, and the carefully conducted clinics given at the free dispensary operated by the University. Each student not only hears the lectures but comes

under the individual instruction of the professor. This is especially important for the laboratory and clinic courses. In addition to the clinics at the dispensary, those at the Piedmont Hospital in Charlottesville are utilized.

Under the laws of the University, each professor charged with the duties of instruction is required to give his whole time to the collegiate work, and hence the courses are of unusual thoroughness.

Wm. M. Thornton, LL.D., Chairman of Faculty.

UNIVERSITY OF VERMONT, MEDICAL DEPARTMENT.

BURLINGTON, VT.

The thirty-fourth annual course of lectures will begin in January and continue six months, ending in July.

This extension of the term will increase the scope of the instruction, and prove of great advantage to the student. The preliminary term has been abolished. No private courses by any of the professors will be tolerated by the faculty.

Instruction will be given in the following branches: Anatomy, physiology, chemistry, materia medica and therapeutics, practice, obstetrics, surgery, diseases of children, medical jurisprudence, neurology, ophthalmology and otology, gynecology, dermatology, venereal diseases, pathology and bacteriology, hygiene, sanitary science and examinations for life insurance.

Laboratory courses at this college in urinary analysis, histology, pathology and bacteriology, and practical work in physical diagnosis, surgery and demonstrative obstetrics, are now compulsory.

The instruction is given by scholastic and clinic lectures, by recitations and by practical manipulations by the student.

The clinic advantages are in many respects unsurpassed.

For further information address A. P. Grinnell, M.D., Dean.

WISCONSIN COLLEGE OF PHYSICIANS AND SURGEONS.

MILWAUKEE, WIS.

The fourth annual course of lectures will begin September 22. The length of the course is twenty-seven weeks, exclusive of the holiday vacation, the term ending on April 5, 1897.

This institution adopted the four-year course in 1895, and all students matriculating this year and hereafter will be required to spend four years in college work, unless their previous studies have entitled them to apply for advanced standing.

The fees for the course, including laboratory and lecture fees, and anatomic material, are $95.

Clinic cases are furnished by the Presbyterian Hospital, which is in the exclusive control of the faculty of the college, and by the College Free Dispensary.

W. H. Washburn, M. D., Secretary.

Caroid.—A vegetable digestive ferment, derived from the plant known as *carica papaya*, or "paw-paw" (not the indigenous plant but an exotic found growing wild in Polynesia and now cultivated in most tropical countries). Caroid is a concentrated extract of the juices of the plant, made by cold methods, thus preserving the ferment in all its strength and freshness. Its action, contrary to that of pepsin, on the one hand, which acts only in acid media, and of diastase, pancreatin, etc., on the other, which act only in alkalin media, is equally good in both acid and alkalin fluids. The dose is from 2½ to 5 grains.—*Nat. Druggist*, September.

GONORRHEAL CONJUNCTIVITIS; ITS TREATMENT.

Read in the Section on Ophthalmology at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896.

BY LOUIS J. LAUTENBACH, A.M., M.D., PH.D.

Surgeon to the Pennsylvania Eye and Ear Infirmary; Nose and Throat Physician to the Odd Fellows' Home; late Chief of the Eye Clinic of the German Hospital, etc.

PHILADELPHIA, PA.

Conjunctival diseases are among the most frequent of eye affections, but each year as the general practitioner's special knowledge increases, he undertakes more and more the treatment of the inflammatory eye affections, especially of the appendices of the eye, and, in consequence, the specialist sees less and less of these troubles, except when present in an aggravated form. The study of conjunctival diseases is not only important in relation to their treatment but as they are very often symptomatic of other local or general conditions it is especially necessary to have a most intimate knowledge of their various aspects. Again their seriousness is not so much *per se* as in a weakening of the surrounding structures, thus giving rise to secondary inflammatory conditions.

Of these conjunctival inflammations there are several which are specific or general in their origin, bearing a marked resemblance to each other which can be traced not only in their origin but in their course and treatment as well. I refer especially to the diphtheritic, epidemic, gonorrheal, blennorrheic and trachomatous forms of conjunctivitis. All are occasioned by a specific germ and therefore all are contagious, all except the latter appear as localized epidemics, and formerly this was present often as an acute epidemic; all are of an acute type and rapid in their progress, all extend rapidly to various adjoining structures, especially to the cornea, tending only too often to the production of most serious lesions. In fact, blindness as a result of these specific inflammations is only too prevalent. This entire class of inflammations should be directly under the supervision of the State. A move in the right direction has been the passage of laws for the reporting and proper treatment of cases of ophthalmia of the newborn, which have now been passed by the legislative bodies of numerous States.

Blennorrheic conjunctivitis, the ophthalmia of the newborn and the gonorrheal conjunctivitis of the adult, are in many ways the most important and serious of eye inflammations, causing more than one-tenth of all the existing blindness, and in addition, occasioning partial loss of sight in twice as many. While the gonorrheal form is less common than ophthalmia neonatorum, it is not the less virulent and its results are often more serious. Some years ago I was assured by a member of the staff of a prominent general hospital that up to that time no case of gonorrheal conjunctivis had left the institution without having lost the sight of one or both eyes. So serious were these cases looked upon in the immediate past that many institutions refused to receive them, basing their refusal both on its contagiousness and its origin; undoubtedly the bad results obtained had some weight in occasioning such a decision.

The ill results following a case of gonorrheal conjunctivitis can usually be attributed either to the usual indisposition of the patient to admit the cause of his trouble or his want of knowledge thereof, occasioning the consequent delay of treatment; second,

the rapid progress of the disease with the consequent swelling of all the tissues in and about the eye, occasioning destruction of important eye structures by pressure and interference with the circulation and nutrition of the parts; third, a want of thorough cleansing; fourth, a want of proper treatment.

The first of these is sufficiently familiar. How often do we see these cases progressing even to the pustular stage without application for treatment having been made, either because the patient did not recognize the ailment, or recognizing it, hoped to conceal it. In this way considerable mischief is often done before aid is sought. The seriousness of the disease is occasioned more by neglect of prompt treatment than aught else; a day lost may mean the loss of the sight. The public generally should understand that in eye diseases a stitch in time saves not only nine, but sometimes a whole lifetime of darkness.

The rapid progress of the disease, extending within two or three days through the infiltration stage with distended lids and chemotic conjunctiva into the pustular one with sometimes, almost simultaneously, ulceration and breaking down of the cornea, is unfortunately too frequent. To one unaccustomed to such cases or not having a true realization of their violence and virulence, the progress may be so rapid that serious results are produced without sufficient effort having been made to avoid them. In these cases the rapidity of the disease should be anticipated and guarded against by appropriate advice and treatment.

The need of thorough cleanliness is apparent, but the method of its accomplishment may not be so clear. Cleanliness in such cases means the effective removal of all discharges on the conjunctiva and in the folds thereof, and the decomposition and removal of all discharges and gonococci which may lie in the various minute fissures and crevices between the epithelial cells of the superficial layers. In these cases the cleanliness must be considered part of the treatment, and usually is the most important part. Many will recover without other treatment, whereas, local applications without cleanliness will often avail nothing; it is the one essential to be adhered to religiously.

To thoroughly cleanse an eye the seat of a gonorrheal inflammation is often no easy task. The swollen lids with the tenderness and photophobia make it peculiarly difficult, and when there is maceration or ulceration of the cornea it is yet more so, as there may be the added danger of bursting the ball by the necessary manipulations.

I will outline the method which in my work I follow as rigidly as circumstances will allow. I first wipe off the lids and any discharge which appears between them with a piece of absorbent cotton saturated with a 3 per cent. solution of peroxid of hydrogen. I invariably use the Oakland peroxid on account of its comparative purity and freedom from acidity. I then instill between the lids, with a pipette, about twenty or thirty drops of the same solution and continue this until there is little or no bubbling. I then evert the upper lid and instill into the opened palpebral folds more peroxid, and then wipe the parts with absorbent cotton wet with the solution. I then treat the lower lid in the same way, being sure to thoroughly cleanse the cul-de-sac. I replace the lids and gently rub the ball at all parts of the lids, with the finger tips. I then take a saturated solution of boric acid and repeat with it all the manipulations described above, doing this very thoroughly and using the solution liberally.

The peroxid cleanses the surface and serves to destroy any diseased conjunctival epithelium and penetrates the crevices and interspaces where the pus and gonococci have collected and decomposes these masses, bringing the detritus to the surface. Allowing the peroxid to lie in contact with these diseased structures for a few minutes serves to so thoroughly decompose them that they are readily removed by the subsequent washing with the boric acid solution. This solution not only washes off the foreign matters but also relieves the burning sensation of the peroxid and while soothing the eye serves to produce a healing effect upon the ragged but healthy epithelial cells. In addition to this personal cleansing of the eye which I insist upon doing at least once or twice a day, the patient is to have his eye thoroughly cleansed by the nurse with a saturated solution of boric acid at least every hour and in some cases every half hour. If the swollen condition of the lids renders this cleansing difficult, the severity of the disease makes it only the more imperative.

It seems evident that no treatment can exercise its normal effect without the thorough cleansing above described. These cases are of such a nature that the neglect must be eliminated—the treatment must be most vigorous and thorough.

The local medicament of most value in these cases is undoubtedly the solution of nitrate of silver. In all the germ diseases of the conjunctiva its use is invaluable. I use it of a strength of from 10 to 60 grains to the ounce—the more severe and active the inflammation, the stronger the solution. It is to be applied thoroughly with a cotton wound probe (never with a brush) over the palpebral conjunctiva, carried into the cul-de-sac and then to the ocular conjunctiva, carefully avoiding the cornea. This application is to be made by the physician once or twice a day as necessary and is to be followed by the instillation of 4 or 5 drops of castor or olive oil which eases the pain and lessens the friction of the roughened and diseased conjunctival surfaces. In addition to this personal application, a one or two grains to the ounce solution of nitrate of silver is to be instilled into the eye by the nurse from two to four times a day, invariably after washing with the boric acid solution. If the cornea be ulcerated, the treatment is to be as thorough as is consistent with safety, avoiding the use of the strong nitrate solution on the cornea or its accidental access thereto.

If chemosis be present, I invariably incise the conjunctiva in numerous deep lines radiating from the cornea so that the subconjunctival infiltration may gradually find vent and thus afford sufficient room for the natural increase in the amount of the exudate, and at the same time by decreasing the tension, lessen the abnormal pressure on the corneal border.

In addition to the above, I use ice bags and iced cloths whenever the inflammation is peculiarly virulent, or there is very much swelling of the lid or chemosis, and use atropia or eserin locally whenever I have corneal involvement, the choice depending upon the tension of the ball as well as the location and extent of the ulceration and the general constitutional peculiarity of the patient; in those inclined to rheumatism, all other things being equal, I always prefer to use eserin. I have also found ice to be invaluable in the early stages of corneal involvement,

when the cornea first appears hazy. In fact in all corneal inflammations I have found the use of ice peculiarly beneficial in preventing the disorganization of this tissue.

A matter which I have not touched upon but which is of supreme importance, is the prevention of the disease attacking the sound eye. This is accomplished by thorough attention to the affected eye, which I hope I have fully explained, and preventing the discharge of the diseased eye from infecting the sound one. This is attempted by many by closing the healthy eye with a watch glass or adhesive plaster, carefully applied. I formerly built a dam of shoemaker's wax upon the bridge of the patient's nose, carrying it well down toward the tip and up on the forehead, directing the patient never to lie upon the unaffected side. While still occasionally using this method, I rely more on the bandaging of the sound eye and its regular daily cleansing by the physician before he treats the affected one. The cleansing is that outlined above, consisting first of the use of a 3 per cent. peroxid of hydrogen solution followed by thorough cleansing with a saturated solution of boric acid, then drying the eye and covering it thoroughly with a roller bandage, first dressing the eye with absorbent cotton covered with waxed paper.

By this method of bandaging, even though the discharges soak into the bandages, the waxed paper prevents their access to the eye, and should the germs surmount this barrier they will be absorbed by the cotton wad, which is an efficient sterilizer, and even though it were possible to penetrate through this they will meet a closed eye, which they can not enter. Another advantage of the bandaging is the rest given the healthy eye, thus preventing excessive motion in the diseased eye, and it will be found that corneal involvement will be more rare, and when it occurs it will be less severe.

In a few words the treatment can be summed up as rigid cleanliness carried to the extent of destroying and removing the gonococci and all the broken down cells, with sufficient stimulation afterward to increase the normal cellular activity, stimulating thus the reparative processes, meeting the complications as they arise, promptly and vigorously. The treatment of the unaffected eye to consist of rigid cleanliness with slight stimulation, careful bandaging and exclusion of the discharges from the diseased eye.

THE USE OF CICATRICIAL SKIN FLAPS IN THE OPERATION FOR ECTROPION OF THE UPPER LID.

Read in the Section on Ophthalmology, at the Forty-seventh Annual Meeting of the American Medical Association at Atlanta, Georgia, May 5-8, 1896.

BY F. C. HOTZ, M.D.

CHICAGO.

In my paper on skin grafting read last year at our meeting in Baltimore, I pointed out the superiority of Thiersch's skin grafts over the thick skin flaps usually employed in the operations for ectropion of the upper lid. I said, "occasionally, however, the skin flaps taken from the vicinity of the everted lid possess all the conditions necessary for a perfect cosmetic result." I had in mind the thin, glistening cicatricial skin which usually covers the vicinity of the everted upper lid. In several cases where the eyebrows had been destroyed to such an extent that a large flap could be cut from this cicatricial skin above the lid, I used such skin flaps as a substitute for the lost lid skin, and found that, contrary to the general belief, these flaps could be transplanted as successfully as the flaps of normal skin, and that their use has

FIGURE 1.

several decided advantages over all other methods of transplantation.

FIGURE 2.

For these reasons I wish to report a case in which a cicatricial skin flap was used: In January, 1889, a boy 14 years old was admitted to the Illinois Charitable Eye and Ear Infirmary to be relieved of complete ectropion of the upper lid of the left eye and lower lids of both eyes, the result of extensive caries

of the orbital margins, when the boy was 4 years oldl

As the operations on the lower lids have no specia. interest, it is sufficient to state their reposition was accomplished by the well-known V-shaped incision combined with Arlt's operation for shortening the overstretched lid border.

The border of the everted upper lid of the left eye was drawn up and fixed to the temporal portion of the supraorbital margin, and above it a large stretch of cicatricial skin extended far into the frontal and temporal region (indicated by the dotted area of the pictures). The temporal half of the eyebrows had been destroyed, and their absence made the following operation feasible:

From a point (Fig. 3, *a*) near the inner canthus an incision was carried obliquely upward past the end of the eyebrows, well up into the cicatricial skin above

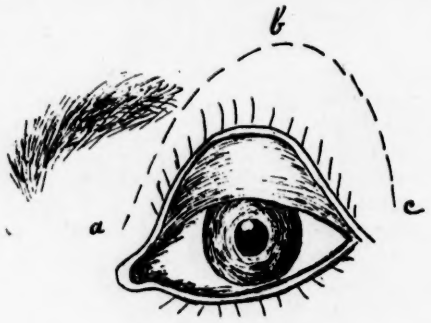

FIGURE 3.

the supraorbital margin, and then continued at a considerable distance from the lid border in a curved line downward to a point (*c*) about six millimeters from the external canthus. The large skin flap (*abc*) mapped out by this incision was carefully dissected from the underlying scar tissue down to the lid border, with which it was left connected. The lid, then, was released from all cicatricial adhesions and replaced in its normal position.

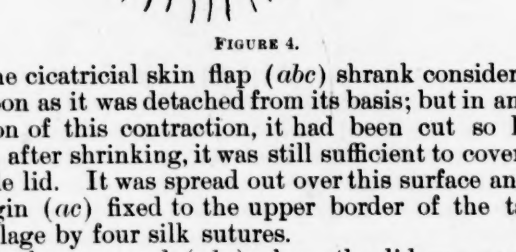

FIGURE 4.

The cicatricial skin flap (*abc*) shrank considerably as soon as it was detached from its basis; but in anticipation of this contraction, it had been cut so large that, after shrinking, it was still sufficient to cover the whole lid. It was spread out over this surface and its margin (*ac*) fixed to the upper border of the tarsal cartilage by four silk sutures.

The large wound (*abc*) above the lid was covered by sliding into it a skin flap (Fig. 4, *bde*) from the temporal region, its margin *bd* being united with *ab*, and *de* with the margin *ac* of the new lid skin. This flap also contained a great deal of scar tissue. The small wound remaining at the temporal side of the transplanted flap was left to heal by granulation.

The healing was uneventful, and the accompanying picture (Fig. 2), taken five months after the operation, shows the excellent result of this procedure.

This operation supplies the replaced lid with a thin and light skin which adapts itself nicely to the configuration of the lid and does not restrict its movements. In this respect it is fully equal to the Thiersch grafting, over which, however, it has the advantage that the lid need not be rendered immobile by sutures or ligatures for a number of days.

But the most important advantage of this operation lies in the fixation of the new lid skin to the tarsal

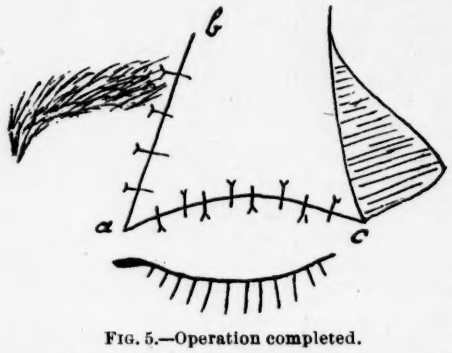

FIG. 5.—Operation completed.

cartilage. This fixation renders the lid skin independent of all tissue changes which may take place in the supratarsal region. No amount of shrinkage of the transplanted flap in this region can cause a reëversion of the lid, because the firm union of the lid skin with the upper border of the tarsal cartilage makes it absolutely impossible that the contraction of the supratarsal tissues could affect the lid skin and the lid border.

MALIGNANT DISEASE OF THE NASAL CAVITY SHOWING THE VALUE OF EARLY DIAGNOSIS.

Read in the Section on Laryngology and Otology at the Forty-seventh Annual Meeting of the American Medical Association, held at Atlanta, Ga., May 5-8, 1896.

BY J. H. SHORTER, M.D.

MACON, GA.

I will mention briefly a case of what proved to be malignant tumor of the interior of the nose, to show what differences of opinion as to diagnosis, there may be among competent men.

It was the case of a gentleman, sent to me from Milledgeville, Ga., about a year ago. He complained of a lump on the side of his neck under the jaw, and a feeling of obstruction in the left nostril.

I found a large polypoid growth in the upper part of the left nasal cavity, which I presume sprang from the ethmoid, and which I thought presented the appearance of malignancy. I removed a large piece, examined it, and also had it examined by a competent microscopist, who pronounced it a carcinoma. I informed the patient's family physician of the confirmation of my opinion, and recommended an immediate operation, as the only hope of relief, though I did not think the growth could be radically removed without resection of the superior maxilla.

I did not see the patient again. The family became very much alarmed after my diagnosis, and sent him to a specialist well known throughout the South. This gentleman disagreed with my opinion, pronounced the trouble *syphilis*, and promised a speedy cure.

Notwithstanding vigorous medical treatment, he grew worse and began to lose flesh, and suffer great pain. I wrote and suggested that he go to some hospital, where he could have the best advantages. He then went to New York, consulted a well known surgeon, who had sections of the tumor made for microscopic examination. It was decided to be a fibroma and non-malignant. The surgeon removed the growth by section below the orbit, resecting the malar and part of the superior maxillary bones, promised the patient complete recovery and no recurrence of the disease.

On returning home, his physician wrote me as above. I replied that I sincerely hoped for favorable outcome, but much doubted it.

About three weeks later, the tumor reappeared, and the patient died at the expiration of three months with probable extension into the cranial cavity. There was headache, paralytic trouble, and great exophthalmus.

The diversity of opinion in this case appears to me as being unusual; one of the foremost men in the South pronounced it syphilis, another eminent surgeon of New York pronounced it non-malignant, both after careful examination, yet the patient succumbed promptly to what was evidently cancerous disease.

DISCUSSION.

Dr. D. BRADEN KYLE, Philadelphia—In regard to microscopic examinations as mentioned in Dr. Shorter's case, I find that it is not always possible to make a diagnosis from the tissue sent for examination, but if certain rules are followed the examination is of value. In a microscopic examination we must take into consideration the fibrous stroma, the blood vessel, and the cells, and their relations to each other. In the case reported I would like to know whether there was any ulceration of the tumor. In the mucous membranes, especially of the upper air passages in which there is very little connecting tissue element and where it lines a bony cavity, the small round cell (embryonic) of inflammation would resemble a sarcoma very much and if there was ulceration you would find the vessels beneath mere sluice-ways and lacking vessel walls, nothing more than an attempt at organization of the embryonic tissue, and not necessarily malignant, although resembling sarcoma. Such an eminent authority as J. Bland Sutton states that it is impossible to differentiate this condition from sarcoma. As carcinoma spreads by the lymphatics, has distinct and well outlined vessel walls, I do not understand how the mistake in diagnosis could be made.

SOME OBSERVATIONS MADE DURING THE TREATMENT OF CHRONIC CATARRHAL DEAFNESS.

Read in the Section on Laryngology and Otology, at the Forty-seventh Annual Meeting of the American Medical Association, held at Atlanta, Ga., May 5-8, 1896.

BY THOS. H. SHASTID, A.B., M.D.

GALESBURG, ILL.

The treatment of chronic catarrhal deafness may be considered under three heads: Treatment of the ear directly, attention to the throat and nose, attention to conditions of the body in general.

As regards treatment of the ear directly, I wish to speak only of intra-tympanic operations. As a way out of the confusion that seems to exist regarding the propriety of the application of these procedures, I have divided them for the purposes of my own practice into two well-defined classes. Into the first of these I have placed such procedures as, while of doubtful utility to the hearing, are of some, though slight, danger to life. These are the operations for the removal of one or more of the ossicles with or without part or all of the drum membrane, and mobilization of the stapes. These procedures, as much recorded (and perhaps much more unrecorded) experience goes to show, are often followed, even when performed under strict antiseptic precautions, by severe suppuration; and, as they do not very often produce a really valuable increase in the hearing power, I do not think that even total deafness can justify their employment. The second of the classes into which I divide intra-tympanic operations consists of single and multiple incision of the drum membrane, partial myringectomy, plicotomy, traction on the handle of the malleus, tenotomy of the tensor tympani. These operations are often productive of much good, seldom, if ever, of harm, and are moreover, when properly performed, entirely unattended with danger. Such procedures, even though by no means uniformly beneficial, are proper in cases in which they are not positively contraindicated and in which inflation and massage and treatment of the nose, throat and general system have not proved beneficial.

I report a case that possesses considerable interest from its bearing on the topic of intra-tympanic operations. A lady, aged 30, had been deaf from catarrh for several years. Inflation and massage and treatment of nose and throat conditions had produced no benefit. I, therefore, applied Lucæ's sound. The immediate result was gratifying. The hearing for both acoumeter and voice rose to nearly treble its former power. Within twenty-four hours, however, the patient returned as deaf as before. Again I applied the sound; again the result was brilliant; again the patient returned no better than before. Then I did a tenotomy of the tensor tympani, but without effect. At the end of twenty-four hours the patient returned and requested me to apply the sound again. This I did, with good result; but this time, and this is the point that is particularly worthy of note, the improvement was of comparatively long duration, lasting nearly three months. Encouraged by the measure of success in this case, I tenotomized the tensor in three other cases in which the pressure sound was productive of good but temporary results, but, so far as I could tell, without any effect whatever on the duration of the improvement. These four cases, taken together, impressed upon me the fact that the mechanical problem in cases of chronic catarrhal deafness, so far from being anything resembling a constant one, is of almost infinite variation, and that it is impossible to tell with certainty in advance whether a given operation will prove of benefit, but that in all cases of great severity and unamenable to other treatment, every intra-tympanic operation should be tried which offers a reasonable hope and which does not endanger either hearing or life.

While speaking of intra-tympanic operations, I desire to call attention to an improvement in the shaft and handle of instruments intended for such operations, which, though it was described in the "Archives of Otology" some three or four years ago, has not, I believe, received the general adoption it deserves. I refer to the shaft and handle of Dr. Barclay. In instruments mounted according to Dr. Barclay's idea the handle is joined to the operating shaft by a lateral shaft in such manner that the axis of the handle, prolonged forward, intersects the axis of the operating shaft

exactly at the operative extremity. I have had several instruments mounted in this manner, and find that it gives a precision and lightness of touch unattainable by any other means. I believe that Dr. Barclay's idea constitutes a real progress in otology.

Apropos of the effect upon the hearing of nasal and pharyngeal treatment, I urge the importance to the hearing, of vibration or massage of the nasal and pharyngeal mucous membranes when these structures are the seat of atrophy. The loss of hearing accompanying this throat and nose condition is not invariably slight, though it is usually asserted to be so, being in some cases great enough to interfere seriously with ordinary conversation. I believe that in these cases massage of the nose and throat mucous membrane, if persisted in for some time, will result in relieving a large proportion of them of a measure of their embarrassment. Such has been my experience, and I think that I have exercised reasonable care in the exclusion of other possible causes for the improvement. The only instrument that I have used has been Dr. Freudenthal's vibrator. I have seldom seen any improvement until the massage has been continued for a long time.

Under the head of attention to conditions of the body in general, I report a case in which the hearing was very powerfully affected by belladonna. A patient whom I was treating for chronic catarrhal deafness would, at irregular intervals, suffer a very considerable aggravation of his trouble. This would in a few days quite, or nearly, disappear, only to return in a few days more. The exacerbations were not accompanied by symptoms of cold, but by unusual dryness of the mucous membrane of the throat and nose. On inquiry I found that the patient was occasionally taking a purgative pill which contained, among other ingredients, a quarter of a grain of the extract of belladonna. Naturally associating the belladonna with the dryness, I directed the patient to observe whether or not his periods of increased deafness followed the use of the pill. He reported that they really followed its use. Then, in order to eliminate as possible sources of error the influence of suggestion and also of the various drugs which the pill contained other than the belladonna, I ordered a discontinuance of the pill and then each time the patient came to me I administered to him a tablet, sometimes a blank one, sometimes one containing a quarter of a grain of the extract of belladonna. Each time the tablet containing the belladonna was administered the patient suffered this aggravation, but at no time did he experience an increase in deafness after the administration of the blank tablet. It would seem that the deafening effect of the drug was exerted chiefly upon the middle ear; for the patient's ordinarily somewhat increased cranial perception was still further increased whenever he took the belladonna. I thought the increased difficulty in hearing arose from impairment of sound conduction due to inspissation of secretion among the tympanic folds and the ossicles.

Roentgen Ray Locates Bullet Through the Skull.—The last *Deutsche med. Woch.* (August 13) brings us actual photographs of the heads of a couple of Eulenburg's patients, in which the Roentgen ray discloses and locates a bullet inside the skull. The photograph was taken with the head of the patient resting on the plate holder, with the Crookes' tube about 24 c. above.

SOME RELATIONS OF CRIME TO INSANITY AND STATES OF MENTAL ENFEEBLEMENT.

Read in the Section on Neurology and Medical Jurisprudence at the Forty-seventh Annual Meeting of the American Medical Association, held at Atlanta, Ga., May 5-8, 1896.

BY H. E. ALLISON, M.D.

MEDICAL SUPERINTENDENT MATTEAWAN STATE HOSPITAL, FISHKILL LANDING, N. Y.

Any study of penology should consider not only crime and its punishment, but should also investigate the mental and physical state of the criminal, his capacity and his needs. There are conditions both of body and mind either congenital or acquired which render a person dangerous to himself and others, and attempts to repress criminal acts and to protect society from their consequences and their repetition can never be in any great degree successful until we look in part to the individual and examine him as to his status as a man. With this end in view and especially in the case of the young, who are first offenders, the courts should place criminals in secure custody where they should be confined upon indeterminate sentences and undergo careful observation and training at the hands of men capable of judging just what corrective or remedial measures are needed and for what length of time the convict should be deprived of his liberty.

The anthropologic study of the criminal has of late years interested scholars and especially medical men, and there has been much written and much active discussion as to the relations the criminal bears to himself and to society. As medical men we are interested in the criminal himself; and not so much in the nature and character of crime and its punishment, except as incidentally it involves the study of the man. A great deal of stress has been laid upon marks of degeneracy in the criminal and while we admit the existence of many physical anomalies and mental obliquities among the inmates of our penal institutions we can not point to any one feature or group of peculiarities that necessarily stamps the subject as certainly belonging to the criminal class. To a large degree, however, these factors are useful to enable us to judge something of the probabilities which attach to a person's pursuing a criminal career and aid us in adopting reformatory methods, educational, disciplinary and therapeutic, by which we may combat and change inherent or acquired conditions. We can realize that a child with an excellent heredity and a healthy body and mind is more insured against a criminal career than one presenting all the stigmata of degeneracy. Society has greater natural safeguards in the one than in the other.

The two great determining influences for good or evil are heredity and environment. The medical aspect of crime is more concerned with the former, although the latter can not be disassociated from the question. Environment being susceptible to educational influences and removable, either in a degree or entirely, is more related to the province of the sociologist. It is probable that to environment must be credited the greater number of criminal acts, as the early teaching and training of the child influences largely his subsequent career. Hereditary defects follow closely as a causative factor in the genesis of crime. Out of 6,151 admissions to the Elmira Reformatory, insanity and epilepsy in progenitors were clearly present in 11 per cent. of the number and to this should be added a proportion, uncertain in quantity, wherein ances-

tral history in this respect was untrustworthy or not ascertainable. Drunkenness in ancestry was clearly traced in 38 per cent. and was doubtful in 12 per cent. more. Insanity, epilepsy and intemperance, therefore, appear to exert their potent influence upon those who become the inmates of penal institutions. Necessarily such prenatal conditions must produce degenerative conditions which are stamped upon the offspring. The question arises as to the treatment of such cases. Is it wisdom to determine that it shall be altogether punitive and retributive? It should be the purpose of the law to afford every opportunity for the correction of defective organization by reformatory methods. The physical and mental status of the criminal should be improved by industrial and educational means, the earlier the better, and by efforts directed toward the full deveolpment of bodily health. The complex influences of heredity and environment should not be considered as a mitigation of the crime nor should the fact that the criminal is often a degenerate person be urged in condonement of it. His condition modifies but does not expiate his fault. He should be confined as an exemplary measure but the commitment should still further direct that he should not be released until it was reasonably assured that he was morally, mentally and physically fit to be at large.

Out of the same number of admissions to Elmira before mentioned the physical health was reported as "debiliated, diseased and impaired," in 11 per cent. and the quality of the inmates' physical condition was found to be "low and coarse" in 30 per cent. The mental capacity was tabulated as "deficient or only fair" in 19 per cent. Out of 596 cases admitted in 1893 to the Eastern State Penitentiary of Pennsylvania, 20 per cent. was classified mentally as "dull, simple, very weak or bad." In addition to this, the age at which convictions are found is such that opportunity is offered in youths to effect reformatory results. Out of 1275 inmates of Sing Sing Prison, 42 per cent. were sentenced before the age of 25 years, and out of 6151 inmates of Elmira to which institution young offenders are especially committed, 90 per cent. were admitted between the ages of from 16 to 25 years. There is therefore in criminal anthropology much to engage the attention of the medical profession in connection with the subject of reformatory methods in relation to heredity, intemperance and crime. A further interest attaches to the resulting conditions of degeneracy and to repressive and eradicative measures which should lead either to the reformation or permanent sequestration of the individual. Many abnormalities of the cranium and of the body and its appendages have been described as peculiar to the population of our penal institutions. Asymmetry of the skull and head, of the body, anomalies of the ears, the teeth, the jaws, the palate and of the sexual organs are all indicative of prenatal influences which affect the individual adversely and relegate him to a place among the defective classes. The moral sensibilities are stifled or altogether wanting and the impressionability of the criminal in this direction is slight or absent in the great majority of cases. They are devoted to excitement through alcoholism, sexual excesses or perversions of the sexual instinct and to every form of pleasurable stimulation of the appetites and passions. All these influences tend to mold the physiognomy, which in the popular mind and in a general way is often an index to character.

A great deal of careful study has been expended by scientific men upon the physical characteristics of delinquent man. It appears to be established that among the great mass of criminals there does exist a defective physical and mental organization, an insensibility to moral influences and a predominance of degenerative and atavistic traits. Their instinctive faculties are often well developed and they have a large degree of cunning. Persons who are absolute idiots are not found among convicted criminals. The unfortunate condition of those who are thus affected prohibits them from being capable in the eyes of the law from the commission of crime, and they are not convicted. This condition, when pronounced, attracts attention in early life and invites care on the part of parents or guardians and such defective subjects are usually placed under proper restraint either at home or in custodial institutions. Their recognized place is in a school for feeble-minded children or in custodial asylums or homes. Neither are the insane as a rule found confined in prisons or in penal institutions; though insanity may be developed among those confined there. Many criminals, however, are on the borderlands of each condition. The higher the state of civilization the greater the differentiation between the grades of the defective classes and the more intelligent are the methods of care exercised in dealing with them. The aim in the education of the feeble-minded as well as of the deaf and dumb and blind is to render those so afflicted able to care for themselves in a measure and to relieve society in as large a degree as possible from the burden of their support. There are thus converted into productive units what otherwise, without training and care, would remain dangerous and troublesome factors. The care of the insane is based upon similar economic principles. In the treatment of criminals however measures are still adapted to punitive and retributive ends rather than to such as tend to promote the correction of inherited and acquired deficiencies by securing the reformation of the criminal. There are more reasons why the instinctive criminal who has failed of reformation and received several convictions should be for a long term, or permanently, deprived of his liberty than exists for the detention of the insane and other dependent classes. Out of 981 annual admissions to Sing Sing Prison in 1894, 66 per cent. had served one or more previous sentences and out of the total population of 1365 for that year 14 per cent. were known to have received from three to eight convictions. Numbers of recidivists in prisons are undoubtedly insane or possessed of a very unstable mental equilibrium which is disturbed by trivial causes.

In the State of New York convicted cases who exhibit mental derangement are transferred from all the penal institutions to the Matteawan State Hospital upon the certificate of the prison physician, approved by the agent and warden of the prison or other officer in charge.[1] This method of commitment is now modified. When a convict is so committed he is, upon recovery before the expiration of his sentence, returned to penal custody. If his sentence expires while he is still insane he is detained in the hospital until such time as he shall recover or be released under bond to the custody of his friends. This practice has led to the accumulation at the hospital of 137 cases with expired terms but who are still insane out of a total population of 325 convicted inmates. Many of these cases are defective naturally and confinement in prison has

[1] This law had passed and took effect July 1, 1896.

developed some degree of mental disturbance which often passes away, but even after their normal condition is restored it frequently is a question whether to retain them permanently as inmates of the asylum or to return them to prison. The fact that they have been determined sane by the courts at the time of their trial would seem to indicate that before the law they are considered responsible and therefore proper subjects for release. The great majority of these cases are addicted to vicious and immoral practices and to sexual indulgences. Their influence is corrupting and as a rule debasing. They display to a marked degree abnormalities of physical structure and certainly belong to a degenerate type of humanity. As a rule when at large they are intemperate in their habits and irregular in their ways of living. The form of insanity which affects them is not of an active or actually maniacal form, but is rather a quiet state of depression with delusions often of persecution. It does not reach an acutely maniacal type but rather seems to be an intensification of natural instability attended with morbid feelings of suspicion and of actual hallucinations of hearing and sight. There is not as a rule much display of intellectual power in their descriptions of their own subjective states. Their mental capacity is generally limited and their insanity consequently does not show much ideation of the higher and finer attributes of the mind, either of morals or intellect. As a rule, their moral sense is defective and their mental development below the average. Criminals who become insane are, in general, low-grade examples of the race. On the contrary, the inmate of an ordinary lunatic asylum, as a rule, is a patient possessed of good character, who has been self-supporting and is of a social, kindly and well-disposed nature. He is often possessed of a trade or calling in which he is more or less proficient, or he has been accustomed to labor regularly and honestly for his living. Upon his convalescence he becomes useful to the institution in those directions in which he is proficient and often in chronic conditions of mental disease he obtains intellectual diversions and physical exercise through occupation which benefits not only himself but others. The convicted insane, however, are a different class. They have engrafted upon a naturally defective mental and physical constitution, an early bent or training, the result in part of their environment which renders them dangerous factors in any community. Devoted to acts of housebreaking and inclined to thefts or robbery, upon convalescence or in chronic states, they turn their skill in such directions, toward escaping from custody. They are prone to associate together, to sustain and assist each other; they use their talents before employed in burglarizing and forcibly entering houses, to efforts now to get out of custody. The insane are said never to combine, but insane convicts will do so. The ordinary insane and the insane convict are not members of the same guild.

Occasionally a patient is committed to prison who is insane and whose crime is the result of such insanity. His mental condition may not have been recognized at the time of his trial and conviction; or the plea may have been put forward and failed as a defense. Such cases are quite different, both mentally and physically, from the ordinary inmates of the prison. They are properly classed among court cases, to whom we shall allude. The plea of insanity, however, while in many cases looked upon with disfavor by the public yet often results in a duration of confinement which averages longer than a definite sentence imposed by the court.

In order to secure the proper certification of convicted cases from the penal institutions who may be regarded as insane, the State of New York in the revised insanity law presented to the Legislature this winter, proposed to adopt the following procedure, which is a modification of the present method: Whenever the physician in connection with any penal institution shall certify to the warden that any inmate therein is insane, the warden shall notify the judge of the district wherein the said prison is located who shall appoint two physicians to examine into the prisoner's mental condition and, if insane, the judge shall order his confinement at the Matteawan State Hospital, there to be detained during the term of his sentence unless sooner recovered, when he is to be remanded to prison. If he is still insane at the time his sentence expires, he shall remain in confinement until in the judgment of the medical superintendent he is fit to be at large. This procedure substitutes an examination by two physicians and a judicial order of commitment in the place of the simple certificate of the prison physician and order of transfer by the warden.

There is a second and very important medical aspect of crime. A certain class of the insane commit crimes as the result of their insanity, not for the sake of gain nor for the ordinary and sane motives which actuate most men, but by reason of delusions or mental derangement. A person whose mind is thus disturbed may offend the law by reason of some overpowering false belief. He may assault another in the frenzy of a semi-conscious state of epilepsy. He may act without adequate motives or from the weakest of motives as in the case of a pronouncedly demented person. These acts are not the result of any instinctive or acquired criminal habits or desires, but are the products of an actively diseased brain. The real animus which actuates the perpetrator may be a lofty one, it may be in the eyes of the patient an act of self-defense against imaginary enemies, the product of an insane delusion which controls the patient's mind, or it may simply be a purposeless unreasoning crime perpetrated without a motive in an automatic or semi-conscious state. These patients present a strong contrast physically, intellectually and morally to those commited from penal institutions. They are freer from those anomalies of physical development and growth which are so often found among those of the criminal type. There are among them more persons who have attained to a fuller stature and higher development, their cranial configuration and physiognomy and conditions of bodily growth betoken a better type of manhood.

Intellectually they show a greater natural endowment and a higher degree of education. Their delusions are more systematized and exhibit a wider range, spread over a larger field, embracing a much greater complexity of thought and arrangement. Their ideation is more vivid and relates to a greater variety of subjects in trades, business, law, medicine, religion, literature and the natural sciences, showing greater educational advantages and a higher cultivation and greater capacity of mind. Naturally they differ from the criminal class very decidedly. They have a higher ethical sense, a broader appreciation of the responsibilities imposed upon themselves and a greater

regard for the duties which they owe to others and to society. They are freer from vicious habits and intemperance and from unnatural sexual practices, and express an abhorrence of many things which the criminal regards with favor or indifference.

The nature of the crimes committed by unconvicted cases and those admitted to the asylum from prisons show an equal divergence. The former are acts largely directed against the person in the nature of assaults to do harm, while the latter consist of burglaries, thefts, robberies and crimes against property for gain. Among 1,733 patients admitted to the Matteawan State Hospital the ratio of crimes committed against the person by the cases from the courts compared with those from penal institutions has been as follows:

	Convicted		Unconvicted.
Assault to harm	1	to	$2\frac{1}{3}$
Murder, manslaughter, etc.	1	to	$22\frac{2}{3}$

Crimes against property where the motive was simply gain, show an inverse ratio.

	Convicted.		Unconvicted.
Burglaries	3	to	1
Larcenies	$2\frac{1}{2}$	to	1
Robbery	7	to	1

Persons adjudged insane show a large preponderance of crimes against the person with intent to harm, while convicts who become insane while in prison are as a rule charged with offences against property. The degenerate individual who commits a crime for which he is arrested usually sins in the direction of appropriating something which for one reason or another he covets. He is disposed to acts of theft and robbery. He wishes to gratify in some way his appetite, and has very little regard for the property rights of others. He is incapable of resisting impulses to do wrong in these directions and constitutes a member of an unstable, weak and defective class of individuals. The cases from the courts, however, are not governed by these lower motives. Their acts are defensive acts, not as a rule aggressive, in the proper use of that term. They endeavor to avoid the necessity which they think exists to commit assaults to protect themselves. They may believe themselves poisoned, the victims of conspiracy, or in danger of their lives. They think and act as ordinary men would act but their premises are wrong and they are led by delusions which govern them. The commission of an assault with no good motive discoverable raises the presumption of insanity. The motive will often be found to be simply the promptings of disease. The insane know the difference between right and wrong in the abstract, and reason very clearly upon the subject, but in relation to their own particular act they can not form a rational judgment. This has led to a confusion as to the responsibility of a person charged with crime. He may know it is wrong to kill, but through his diseased brain imaginary voices prompt him; sights, sounds and all evidences of his senses mislead him and he is influenced to believe that what he apparently hears and sees is real. In relation to his particular act he does not know that he has done a wrong. He may know the nature of the act, whether it was homicidal or intended to be such, but he regards it as of the same quality as an act of self-defense and therefore as to this act he is unable to form a proper judgment. Many cases are improperly adjudged insane and committed to prisons for life, or executed, simply as a result of the misapplication of the legal test of responsibility. One-sixth of the life men committed to the prisons of New York are inmates of the Matteawan State Hospital. Their insanity has been recognized after conviction and while serving terms of imprisonment.

Crime in one of its medical aspects may be regarded as in part the product of degeneracy caused by a bad heredity and intemperance in ancestry combined with a bad environment. An effort should be made to reclaim and reform the individual by efforts directed toward improving his mental condition and the development of his mind and body in early life by educational measures involving thorough mental and physical training and manual instruction in some self-supporting industry. Proper moral and religious training is essential, in which should enter the true spirit of Chistianity as well as its forms, and which should permeate the life of the institution. The mind, the morals and the hands should be cultivated as far as possible. If the criminal be found incorrigible he should be placed for a long term of years in some penal institution or committed to the custody of a criminal lunatic asylum, there to remain. Aside from these conditions let his term of imprisonment be determined by his conduct within limits fixed by the court.

In the other medical aspect which relates to those features purely the outcome of disease, no personal responsibility can be attached to such offenders, but they should be placed in safe custody in an asylum, if possible in one devoted to the care of the dangerous insane. While they should not be imprisoned and punished as criminals, yet society should be most carefully guarded against their acts, and their release in the event of recovery should be a matter to be most conservatively considered. As a fact, the ratio of recoveries in such cases is not large. Hallucinations of the special senses are common, especially of hearing, and the disease is essentially chronic. Persons who commit murders or assaults upon life are not as a rule habitual criminals, and if their mental condition is questioned in court they should be carefully examined. The motive should be sought for, and if one is found, its origin should be determined, whether it had its inception subjectively in the diseased brain of the patient, or arose from external causes, such as affect men in general in their conduct. The absence of motive should also be given its weight. The unreasoning and semi-unconscious act of an epileptic, while it might relegate him to an asylum for life, should not place upon him the stigma of a felon. Serious crimes against the person are not usually committed by demented persons, yet they occasionally happen, and when they do, the well known and established character of the defendant is easily determined. The adoption of intelligent measures for the suppression and minimizing of crime is a subject that will always demand attention. It is a social question connected with government, and has many legal relations, but has as well a broad medical side to which the attention of the profession should be turned. Much may be done to awaken public interest in reformatory methods and to create a proper sentiment in relation to the custody and care of criminals, particularly such as are of the degenerate type or who suffer from the effects of an outbreak of actual insanity. The punishment of the criminal has more to do with the personality of the individual than with the crime itself. The subject is closely connected with questions relating to immigration and the importation of the degenerate, the

defective, the insane and the habitual criminal. It relates to the sequestration of all so affected, which custody not only confines the individual but limits for a time or permanently the exercise of his reproductive functions.

SURGERY OF THE KIDNEY.

BEING A STUDY OF A SERIES OF CASES IN WHICH METHODS OF DIAGNOSIS AND TREATMENT ARE ILLUSTRATED.

BY BAYARD HOLMES, B.S., M.D.

PROFESSOR OF SURGERY IN THE COLLEGE OF PHYSICIANS AND SURGEONS OF CHICACO.

PERSISTENT RENAL HEMATURIA.

There are still many dark chapters in pathology and clinical medicine. To one of these belongs the subject of this paper. It can only be illuminated by calling the attention of the profession to the clinical features of these obscure cases and bringing to light the experience of the profession, which lies hidden in the literature and the note books. This paper tries to accomplish these two things and leaves for the fortunate pathologists the task of demonstrating the pathologic lesions of what seems to be a clinical entity.

Renal hematuria is to be distinguished from hemoglobinuria by the presence of blood corpuscles in the urine coming from the kidney in the place of urine stained with the coloring matters of blood.

The case here recorded and the collection of those relatively similar from recent medical literature seem to point to an unknown condition, or series of conditions, of which renal hematuria is the principal symptom. This condition has been met with in nearly all the hospitals of the world and it has been given, in the hospital reports, that clinical diagnosis, hematuria, which is so unsatisfactory to the pathologist. Thus, in the Berlin Charité, during five years ending 1893, there were 124,000 admissions, of which 22 received the diagnosis of hematuria. In the English reports this diagnosis is still more frequent.

Renal hematuria is common enough in injury of the kidney, in nephritis, in acute infectious diseases, in scurvy, in tuberculosis of the kidney and in calculus and new growths in the kidney. In the case before us the bladder showed no evidence of tubercular disease. The examination of the urine rejected nephritis and the examination of the blood excluded malaria. No detritus or formed elements, such as might reasonably be expected in cancer or other tumors could be found. No tubercular bacilli could be discovered in the sediment. The history had, to be sure, a distinct trend toward an acute local disease of the left kidney, but the condition of the urine from the two ureters pointed to a bilateral or to a constitutional disease.

This case, however, was carefully examined, the general conditions noted, the complete genito-urinary examination made and the contraindications to the removal of the left kidney, required by the clinical diagnosis, were made imperative.

The study of hematuria should always be prosecuted with the greatest care and exactness. The possibilities of tuberculosis, tumor, cancer and calculus are such grave possibilities that no means of diagnosis can safely be omitted. The urethra should be dilated, the bladder examined with the cystoscope and the catheters passed into each ureter, and even up to the pelvis of the kidney.

The danger of producing a ureteritis or a pyonephrosis, by the use of the ureteral catheters must not be forgotten. Nevertheless no case is recorded in which an unfavorable result has followed ureteral catheterization in the hands of experienced and careful operators. Casper[1] reported before the Medical Congress at Wiesbaden, that in 250 cases, of both men and women, in which the ureteral catheters had been used by him no case of infection had occurred. This procedure, like every other surgical operation, should, however, be employed only when adequate indications for it exist, and should, when such indications are present, never be neglected.

Synopsis. A multipara, 39 years old, with no history of hereditary or personal hemophilia; an acute painful attack in the left side accompanied with hematuria, which continued two years. This hematuria increased by exercise. A tender left kidney. Less than the normal amount of very bloody urine from the left ureter; more than the normal amount of less bloody urine from the right kidney; rest in bed and milk diet without improvement. Antisyphilitic treatment added; great improvement.

Mrs. C., 39 years old, was placed in my care in St. Luke's Hospital on April 14, 1896. She was a thin, anemic woman. She had never had malaria. Her husband has had an uncertain venereal history. Her mother is still living, but has some sort of skin disease of an unknown character. Her father died from an operation for hemorrhoids. No history of hemophilia in the family. One sister died of acute pulmonary tuberculosis. The other members of the family are in good health. Menstruation began when she was 13 years of age and was regular up to the time of the present illness. She was married at 18 years, had one child now 16 years old, and some years later had a miscarriage. Her present illness began two years ago with pain in the left side in the region of the kidney and with bloody urine. She was sick in bed at the time with chills and fever for several weeks. She does not know whether the pain or the bloody urine appeared first. During this sickness poultices were applied to the left side and back. The pain has been almost constant ever since. Bloody urine has been the most pronounced symptom of the disease. It is greatly increased on any exertion. The patient has lost twenty-five or thirty pounds and now weighs about 100. She is excessively anemic. The heart's action is violent on the slightest exertion. No evidence of disease could be found in the nose, throat, eyes, ears, or lungs. There was no heart murmur, no lymphatic enlargement, no enlargement of the spleen or thyroid. Since this disease began menstruation has been irregular, sometimes missing two or three months and the flow has been very scanty and watery. On admission she was put on a milk diet, her temperature was 99 degrees F., pulse 72, respiration 22. Twenty-eight ounces of dark bloody urine of an acid reaction and a specific gravity of 1.016 was passed in twenty-four hours. No pus, casts or formed matter, except blood corpuscles, could be found in the sediment, which was precipitated by the centrifugal machine. Examination of the kidneys demonstrated a body moving with each inspiration in the site of the right kidney; in the site of the left a similar body could be felt much less movable and very sensitive to a rolling pressure. The examination was easy on account of the spareness of the patient and the relaxed condition of the abdominal walls. The other abdominal organs seemed to be in normal position and of normal size. The spleen

[1] Berlin klin. Wochenschrift, Vol. 1, 1896.

was certainly not enlarged. The heart's apex was three inches from the median line, and while sitting, a little below the fifth interspace.

On April 14, the left ureter was catheterized and one cubic centimeter of urine, dark with blood, was collected in fifteen minutes. This urine after the removal of blood and albumin, contained 17 grams of urea to the liter. The right ureter was also catheterized. There were 10 cubic centimeters of bloody urine passed in fifteen minutes, containing 28 grams of urea to the liter. By vaginal examination the ureters could not be felt and they were certainly not thickened or enlarged. The interior of the bladder was pale as were all the other mucous membranes of her body. There were 3,500,000 red blood corpuscles per cubic millimeter in her blood. She had had several wounds, but never any symptoms of hemophilia.

It was evident from the examination that the discharge of blood in the urine was not a local disease and the anemia contraindicated the removal of the left kidney, which seemed to perform some little function. The patient was, therefore, put to bed on a milk diet and after a time of no improvement, antisyphilitic treatment was begun. During two months of this treatment the patient gained twenty pounds and the amount of blood in the urine was greatly diminished.

At a recent examination of her urine, about July 15, great improvement was noticed. The urine free from blood and albumin is high colored, 4 or 5 on Vogel's scale. There is about one-half the normal quantity in twenty-four hours, namely 500 cubic centimeters. The normal solids are also about one-half the normal average except uric acid which is relatively in excess and absolutely normal. The albumin is 0.2 per cent. by weight. The urea is 26 grams in twenty-four hours. There are no formed elements in the sediment except a few red blood corpuscles.

This is a very interesting case from the clear history of the disease of the left kidney, the large amount of blood in the urine and the almost absolute clinical indications of a unilateral disease, which might be helped by the removal of the left kidney. The examination of the urine from the two ureters, however, seemed to me a complete contraindication to the operation as it demonstrated the same disease on the other side. The anemia also was a contraindication to any operation, which did not promise to entirely arrest the hemorrhage. The value of catheterizing the ureters is not better shown than by this case. Before any operation is undertaken on the kidney both ureters should be catheterized and the results compared with the combined urine for twenty-four hours.

The pathology of this case is undemonstrated. It is evidently not a case of malaria, as the blood examination and the small spleen plainly showed. There were no parasites in the urine. Neither ureter was enlarged. Enlargement of the ureter might be expected in suppurative or tubercular disease of the corresponding kidney. The fact that some improvement was made under antisyphilitic treatment might be considered by many a positive diagnosis, but to me this fact does not warrant the conclusion. There are many cases in the literature which resemble this one in nearly all particulars.

In December, 1890, Senator[2] presented before the Berliner Medicinische Gesellschaft an interesting case of renal hematuria. The patient was a girl 19 years old, who gave a history of hereditary hemophilia. The cystoscope showed that the blood came from the right ureter. Rest was tried without success. The kidney was exposed by lumbar incision and appeared normal. The hematuria was so great that extirpation of the kidney was considered necessary to save the life of the patient, which was threatened by the anemia. Sonnenburg, who was present, agreed in the conclusion of Senator to perform nephrectomy. When the kidney had been removed it still appeared normal. Microscopic examination discovered the fact that the hemorrhage occurred inside Bowman's capsule and that the urinary tubules contained blood. In the discussion Senator referred to three other cases of a similar nature, one reported by Sabatier.[3] The patient was a woman 30 years old. Pain in the region of the kidney came on suddenly, with dyspnea, vomiting, strangury and bloody urine. The hematuria continued seven years. The patient gave a tubercular family history and had a cough. Repeated examinations showed tenderness of the right kidney, but no tumor. The other abdominal organs were perfectly normal. There was no gravel and no pus in the urine. During the year her case was under observation various diagnoses were made, namely, 1, tubercular kidney and rheumatism; 2, tubercular peritonitis and uremia; 3, paroxysmal hemaglobinuria; 4, nervousness, simulation, and 5, calculous nephritis. Oct. 16, 1886, Sebatier extirpated the right kidney. No stone was found and the microscopic examination did not demonstrate anything abnormal except a slight sclerosis. Sabatier considered the kidney perfectly sound. After forty-eight hours of bloody urine the last trace of blood disappeared and the patient recovered perfectly. Shede[4] is also quoted by Senator as reporting the following case: A strong, well man, 50 years old, with no hereditary taint, had very bloody urine for years, coming on after taking a cold drink. The bladder was found normal. The urine contained red and white corpuscles in their normal ratio to each other, but no other formed elements. Through a suprapubic cystotomy opening the two ureters were catheterized. This procedure showed that the blood came from the left ureter alone. Five days later, July 1, 1889, the left kidney was explored through a lumbar incision. It did not appear abnormal and nothing was found in the pelvis. It was, however, removed, but the microscopic examination demonstrated no adequate cause of the hematuria. Lanphear[5] observed a case of hematuria in a man 55 years old, but he did not catheterize the ureters and made the diagnosis of renal hematuria by washing out the bladder with boric acid solution and finding the fresh injection clear.

Broca[6] recites a case which is interesting in this connection. The patient, well until the present illness, was confined two years before with a perfectly normal puerperium. She served nineteen months as a wet nurse. Menstruation began nine months after confinement. In July, 1890, one month after weaning the child, hematuria appeared with indistinct pain in the right side. This advanced little by little with increasing pain in the right lumbar region; in the left side there was only occasional tenderness. After thirteen months of hematuria, very great lassitude appeared. One physician diagnosed a downward dis-

[2] Senator, H.: Über renal Hämophilie. Berlin klin. Wochenschrift, 1891, No. 1.

[3] Sabatier: Néphralgie hématurique. Revue de Chirurgie, Paris, 1888, p. 62.

[4] Jahrsbücher des Hamburger Stadtkrankenhauses, 1889.

[5] Lanphear, E.: An Obscure Case of Hematuria. JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Chicago, 1894, vol. 22, p. 117.

[6] Broca, A.: Hémophilie rénale et hémorragies rénales sans lésion connue, Ann. malad. des org. genito-urin. December, 1894.

placement of the kidney, a truss was worn without improvement. Sixteen months after the beginning of the hematuria Broca first saw the patient and on strong pressure only could tenderness of the right kidney be demonstrated, but no enlargement or displacement. There was no colic. The urine was uniformly mixed with blood. There was frequent and painless micturition. The patient was in good condition and had a good appetite. A most careful examination of the urine gave no evidence of tuberculosis and no evidence of carcinoma. Rest in bed and a milk diet were tried without effect on the hematuria, which lessened a little during menstruation to increase again after it was over.

On Dec. 17, 1891, the kidney was laid bare through a lumbar incision, peeled out of its fat capsule and brought to view in the wound. Inspection and palpation failed to demonstrate anything abnormal. Exploratory nephrotomy revealed nothing more. This diagnosis was confirmed by Hartmann and Terrier, who stood by. The kidney and wound were closed, the latter without drainage, and recovery followed. The first urine passed after the operation was bloody, after that there was no more hematuria and no more tenderness in the right kidney. The patient was seen occasionally for three years and she remained perfectly well. It would have elucidated this case if the ureters had been catheterized. We do not know that the blood came from the right kidney alone.

Passet[7] describes an interesting and obscure case of renal hemorrhage in a woman who had four children. The first attack came on after menstruation and the next one six months later. It was considered a case of vesical hematuria and was treated by injections of nitrate of silver solution. Cystoscopy was impossible on account of the hemorrhage. Digital exploration discovered a small tumor (?). Suprapubic cystotomy was performed and the bladder found perfectly normal in appearance, the ureters were catheterized and the blood found to come from the right ureter alone. On account of the anemic condition of the patient it was not thought best to do nephrectomy at once. The bladder was sewed up and the patient recovered. The urine became clear and continued so for two years, when a transient attack of hematuria came on again. No similar attacks appeared during the following year during which she was under observation.

A somewhat similar case is reported by Stavely.[8] The patient was a multipara, 39 years old, who noticed blood in the urine two months after the birth of her last child. It was intermittent, but at last it came on every other week. She was anemic, 3,172,000 red, 10,000 white corpuscles per cubic millimeter of blood. The urine was very bloody and contained 110,000 red blood corpuscles per cubic millimeter of urine. No tubercle bacilli could be found in the urine. The bladder was found clear, the left ureter was catheterized and 10 minims (.66 cubic centimeters) of reddish yellow urine containing blood corpuscles was passed in five minutes. This was repeated on the following day, but it was not possible to pass the sound into the right ureter in the ordinary manner. An incision was therefore made in the base of the bladder and the right ureteral orifice exposed and catheterized. The urine from the right kidney contained a trace of blood, the wound in the bladder was closed with silk-worm sutures. The left kidney was then exposed and explored by a deep incision into the back of the kidney down to the pelvis. No disease could be found. The wound was closed. The patient recovered and the hematuria disappeared.

The second patient was probably 35 or 40 years old had borne children. A year ago she suddenly developed hematuria without any known cause, which hematuria had continued, with slight exacerbations ever since. The urine had a specific gravity of 1.020. It was slightly acid and contained quantities of blood but no casts. The ureters were catheterized simultaneously by touch. The bladder was full of methyl blue solution at the time. In fourteen minutes, 20 minims (1.3 cubic centimeters) of dark bloody urine was obtained from the left kidney and 10 minims (.66 cubic centimeters) of clear amber urine free from albumin from the other. The left kidney was exposed and incised along its back while the renal vessels were compressed between the thumb and finger, but no disease could be detected. The kidney was closed with gauze drainage. The wound was also closed. The amount of blood in the urine gradually disappeared until the fifteenth day after the operation, when it was all gone and never returned.

Denny[9] of St. Paul, Minn., reports a case of persistent hematuria and uses its ultimate recovery without operative procedure as an argument against early operation. It would be more logical from these data to insist upon an exact and absolute diagnosis. The history is very clear, but no positive diagnosis was made and as the man, who was 39 years old recovered promptly with vesical injections of nitrate of silver solutions, and has since remained well, it is possible that he suffered from hemorrhage of the bladder.

1. Renal hemorrhage can be demonstrated only by the catheterization of the ureters and kidneys, and these procedures should always be accomplished before nephrotomy or nephrectomy. The Pawlick or Kelley instruments may be used with females, but the Casper or Nitze instrument must be employed in males.

2. The patient should undergo a most careful observation in the hospital and a protracted rest in bed with a milk diet before an exploration of the kidney is made.

3. There is some unknown pathologic condition of which hematuria is a symptom, which has not yet been explained, and this condition seems to be relieved in some cases by nephrotomy and in others by palpation of the exposed kidney.

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[7] Passet, J.: Über Hämaturie und renale Hämophilie. Centralb. für die Krankheiten der Harn- und Sexual-organe, v. 5, p. 397-405.

[8] Two cases of Hematuria with catheterization of the ureters and exploratory nephrotomy, Johns Hopkins Hospital Bulletin, March, 1893, .25.

[9] Boston Medical and Surgical Journal, Vol. 132, p. 183, 1895.

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LUXATION OF THE ENSIFORM PROCESS.

BY LUCIEN LOFTON, M.D.

ASSISTANT TO THE CHAIR OF ANATOMY, AND ASSISTANT DEMONSTRATOR OF ANATOMY, SOUTHERN MEDICAL COLLEGE.
ATLANTA, GA.

Dislocation of the xyphoid appendix is a rare occurrence, and only a few instances have been recorded. Owing to the rarity of this accident, I deem it important to give it publicity.

The patient, a German, aged 33 years, and of of a robust build, consulted me for what he termed "chronic indigestion" about one year ago. He gave the following history: About three years prior to coming to the city he was in Philadelphia on a visit. During his meanderings he inbibed too freely and mistaking a lamp post for the middle of the sidewalk ran against it with great force, receiving a terrific blow, as he explained, about the "pit" of the stomach. The blow felled him to the pavement where he lay unconscious for a few minutes. He was removed to his hotel where he rested fairly well the night of the accident. During the night he vomited freely several times, which seemed to give him relief. The next morning the patient left for his home before medical attention was summoned. After his return home the man was enabled to transact his usual farm duties after an elapse of two or three weeks. The patient has lived in this city for some time and has for the past several months been a sufferer from indigestion, which he says was invariably accompanied by vomiting. This is especially the case if he lies down directly after eating.

Upon examination I found a complete luxation of the ensiform cartilage from the gladiolus, which could be moved easily in all directions.

This manipulation gave the man some pain, and caused him to say several times he "felt sick at the stomach." I tried all manner of palliative measures which proved useless. I suggested an operation with a view to anchoring or extirpating the offending member, but this was not acceded to. The man has been, for the past half dozen months losing flesh steadily, and his weight is now, I learn, in the descendency.

Since consulting me a short while ago, I am informed, the man has moved to some point in Texas.

306 Equitable Building.

SELECTIONS.

Anti-Choleraic Inoculations.—Dr. W. J. Simpson submits the results of the anti-choleraic inoculation work as carried on in Calcutta during the past two years.

The vaccins used for this work are prepared in the laboratory by a specially trained medical officer and the inoculations in the bustees and other parts of Calcutta are done by another medical officer.

The following records of the inoculations are kept in the Health Office:

1. A daily register filled up at the time of inoculation containing name, father's name, sex, age, caste, occupation, residence and place of inoculation; also any relative who may be inoculated.

2. An alphabetical register containing the names of the inoculated with the above details, so that ready reference can be made as to whether a person attacked with cholera has been inoculated.

3. A ward register showing the residence of the inoculated people, so that when any particular locality is affected with cholera the inoculated in that locality may be easily found.

The number of people inoculated during the period under review was 7,690; of these 5,853 are Hindus, 1,476 Mahomedans, and 361 other classes. Considering that the system is a new one, that the inoculations are purely voluntary and everything connected with them has to be explained before the confidence of the people can be obtained, and considering how long new ideas are in taking root among the general population, and in this case it is not merely the acceptance of idea, but such faith in it as to consent to an operation, the number is certainly satisfactory for a beginning.

The present problem can be compared with the introduction of vaccination against smallpox in Calcutta. It took twenty-five years before the number of vaccinations reached an average of 2,000; whereas the inoculations against cholera have in two years nearly doubled that average. This is proof that in spite of the difficulties which every new movement naturally has to meet with, there are large numbers of people anxious to avail themselves of the protective effect of the inoculations.

There is a certain discomfort produced by the inoculations, such as an attack of fever lasting about twenty-four hours, pain at the seat of inoculation on moving, thus interfering with heavy physical work for about thirty-six hours. The discomfort is not, however, worse than that induced by vaccination when the vesicles have risen well, and it has the advantage of not lasting nearly so long. The method of inoculation has been recently simplified by dispensing with the first vaccin, the second now being used directly in smaller doses. This increases slightly the degree of discomfort, but does away with the necessity of undergoing two inoculations. As in vaccination, the symptoms after inoculation, *i.e.*, the degree and duration of the fever and local effect vary according to the idiosyncrasy or peculiarity of constitution of the inoculated person; but it is necessary to prominently bring to notice that although all sorts and conditions of individuals, weak and strong, sickly and healthy, young and old, well nourished and badly nourished, and often persons suffering from chronic diseases have been inoculated in every instance without exception, the inoculations have proved perfectly harmless. In several instances, like that lately in Serampore, reports have been spread that injuries have followed the inoculations; on investigation it has been proved by the official medical and civil authorities that these reports were absolutely untrue. Since the system is new and disquieting rumors are harmful it is important that the Commissioners should know the real state of things in order that they may be able to give assistance in dispelling any false notions on the subject.

When an epidemic, such as cholera, attacks a town there are always localities and classes of the population which are not reached by the infection, while on the other hand, even among those who are actually exposed to the infection there are a number who escape owing to their hereditary or gradually acquired powers of resistance. As a rule outbreaks occur in particular localities and houses. The investigations on the effect of the inoculations are made exclusively in those houses in which cholera has actually occurred, the object being to ascertain and compare the incidence of cholera on the inoculated and not inoculated in those houses in which inoculations have been previously carried out. For this purpose affected houses in which inoculations have not been performed and inoculated houses in which cholera has not appeared are excluded as they do not generally furnish a reliable basis for comparison.

In seventy-six houses there were eighty-nine deaths from cholera, seventy-seven being among the uninoculated and

twelve among the inoculated. The following is an analysis of the observations showing the relative resistance to cholera of the inoculated and not inoculated and the distribution of the occurrences in time.

As in six houses in which uninoculated people were attacked and the inoculated escaped, the number of inoculated present was under one-tenth of the total inmates, thus allowing very little chance of the inoculated being affected; these are not counted in the subjoined tables. As regards the rest the result is the following:

Among the uninoculated members after—1, 2, 3, 4, 5, 6, 9,
Among the inoculated of the same households after 0,—2, 3, 4,—
12, 13, 15, 17, 22, 34, 37, 44, 57, 62, 63, 71, 95, 99, 109, 114, 118, 119, 120, 129, 132, 139,
143, 162, 189, 191, 203——240, 251, 271, 281, 284, 300, 309, 318, 319, 334, 356, 359, 362,
——————— 219, ——————————————————————
370, 372, 378, 383, 384, 386, 391, 393, 394, 401, 404, 408, 416,——433, 446, 448, 453——
——————————————————421,——————————459,
472, 493, 498——673.——720, 723, 724,——and 738 days.
——————512,——688,——————735 and 738 days.

This statement shows that: 1, during the first 4 days after the inoculation cholera occurred among the inoculated and non-inoculated, though in a smaller degree among the inoculated; 2, after the first 4 days there was a period of over a year when there was almost absolute freedom among the inoculated, while among the non-inoculated in the same houses cases were occurring during the whole year; and 3, after this period cases began gradually to reappear among the inoculated as well as among the non-inoculated.

The grouping of the data according to these three periods gives the following results. In the houses where cholera occurred during the first 4 days, a period in which the protective influence of the vaccin is gradually asserting itself, there were 169 uninoculated individuals, who had 6 deaths (3.59 per cent.) and 3 attacks ending in recovery, and 259 inoculated persons who had 5 deaths (1.93 per cent.) and 1 attack with recovery.

In the houses where cholera occurred during the second period extending over a year, there lived 502 non-inoculated who had 42 deaths (8.37 per cent.) and 5 attacks ending in recovery, and 269 inoculated who had 1 death (0.37 per cent.).

In the houses where cholera has occurred during the third period, *i.e.*, more than a year after inoculation, there were 238 uninoculated who had 23 deaths (9.66 per cent.) and 3 attacks with recovery, and 96 inoculated who had 6 deaths (6.25 per cent.).

Thus a comparison of the proportion of deaths among the inoculated and non-inoculated in the three periods gives the following result: During the first period of 4 days the number of deaths among the inoculated was 1.86 times smaller than among the not inoculated. During the second period lasting over a year the number of deaths among the inoculated was 22.62 times smaller than among the non-inoculated; and during the third period, *i.e.*, more than a year after the inoculation, the number of deaths among the inoculated was only 1.54 times smaller than the non-inoculated.

Of the six inoculated belonging to the last group, who were attacked more than a year after inoculation, five had received only one inoculation with the first weak anti-cholera vaccin, and the sixth, inoculated on June 3, 1894, had two inoculations given in very weak doses, as was practiced before the observation made in July and August, 1894, in the East Lancashire Regiment in Lucknow. In this observation at Lucknow it was shown for the first time that the effect of weak doses with which the inoculations were begun in India, tends to disappear as time goes on and is confirmed by the Calcutta statistics. This fact brings the Calcutta statistics into conformity with those obtained in other parts of India and thus confirms the accuracy of the observations made. Since the latter part of 1894 the doses used in the treatment and the strength of the vaccins have been increased, with the object of producing a more lasting effect. But no figures are as yet available to demonstrate whether by such increased doses the object we aim at is actually obtainable.

Without excluding the occurrences of cholera in the inoculated during the four days necessary for treatment, and considering the results for the whole period of time, from the first day of the operation in Calcutta up to the end of last month, the results are as follows: 654 uninoculated individuals had 71 deaths (10.86 per cent.), while 402 inoculated in the same households had 12 deaths (2.99 per cent.). This shows that notwithstanding the incomplete protective effect of the first four days and the gradual disappearance of the resistance in those inoculated with weak doses of weak vaccins, which a large number of the inoculated people have received, the mortality amongst the inoculated, compared with that of the uninoculated, was in the proportion of 1 to 3.63, giving a reduction of mortality of 72.47 per cent., or in other words, in houses where inoculations were performed, and which were subsequently visited by cholera there occurred for eleven deaths amongst the uninoculated, three deaths amongst a similar number of inoculated.—*Ind. Med. Record*, August 1.

The Dangers of the 'Cycle.—The *Lancet* for July 11 has a well-considered special article on the above subject, which concludes as follows: "Two serious sources of danger are the use of the crowded roads by learners and the hiring of machines to novices. A busy road would seem to be the last place a sensible person would select for learning to ride a bicycle, yet three deaths have taken place from this cause within the past few weeks. The hiring out of bicycles to children and roughs bent on what they call a 'spree' should be checked by law. It should be quite possible to license those who let out cycles for hire, and such persons should be made responsible if an accident occurs through the letting out of a machine to an incompetent person. Our contemporaries who are devoted to the interests of 'wheeling' have, we know, already done good service in this respect, but we venture to assert that if they would impress even more strenuously upon the cycling public the importance of strictly attending to some such simple rules as the following much good would ensue. These rules are not intended to be exhaustive nor are they for the expert cyclist, although even the experienced rider should not ignore them. Thoroughly examine your machine before starting on a journey. Do not ride without a brake, which should be attached to the back wheel if possible. Beware of tram lines, especially when they are wet. Avoid turning sharply on a wet or 'greasy' road. Pass horses at a slow speed. Never take the feet off the pedals when riding down hills. Do not ride with the hands off the handles, especially in crowded thoroughfares. Ride carefully when passing side streets or the carriage entrance to houses. Before attempting to pass another vehicle ring the bell when at least twenty yards distant. This will give the rider time to see what the intentions of the driver of the vehicle in front are, and will enable the cyclist to take precautionary measures in time should such be necessary. When riding in parties vehicles should be passed in single file. Warning by the bell should be given in as gentle a manner as possible. The sudden ringing of a loud gong is apt to cause a pedestrian to lose his presence of mind and run into the very danger it was the intention of the cyclist he should avoid. When riding behind vehicles in a crowded thoroughfare be prepared to dismount at a moment's notice if necessary. Keep on the proper side of the road. Ladies should not attempt to ride in the public thoroughfare until they have absolute control over and confidence in their machine. They should keep as near as possible to the curb and ride slowly. Those who wear a skirt should see that it is not too long. It should be lined in front with some glazed material to prevent friction, and all loose drapery which is likely to be caught by the wind and perhaps caught in the machine should be avoided. In addition we would suggest that persons who let out cycles for hire should be under the control of the police. It should

be a punishable offense to let out machines not in proper order, and no child or other incompetent person should be allowed to hire a machine. It should be possible for the police to prevent novices learning in the public thoroughfares."

On the Management of the Tuberculous at Hotels.—The Pennsylvania Society for the Prevention of Tuberculosis, under the presidency of Dr. Lawrence F. Flick, has published circulars of information for gratuitous distribution. The third tract of the series treats of the duties of hotelkeepers in relation to their infected and non-infected guests. Among the points brought out are the following: The linen, etc., of consumptives should be washed separately and should always be well boiled before being washed. The persons to whom such articles are given to wash should be properly instructed as to what to do in order that they too may be protected. As far as practicable, consumptives in the advanced stage of the disease should be assigned to separated tables, in order that their tableware and linen can be kept apart from those of the other tables and washed separately. All such tableware should be boiled before washing. "All parts of a hotel or boarding house which are likely to be frequented by consumptive guests should be well supplied with cuspidors in which there should be at all times a germicidal fluid. This fluid should be changed once a day and the cuspidors should be thoroughly scalded with boiling water. In conspicuous places throughout the house and especially in the rooms assigned to consumptive guests, there should be notices requesting guests never to eject sputa into any place other than the cuspidor, and suggesting that a handkerchief should never under any circumstances be used for the reception of such sputa where a spittoon is at hand. When out upon the lawn, or in any place where a cuspidor is not of convenient access, the sputa should be ejected into paper handkerchiefs, these to be placed, upon returning to the room, in a receptacle furnished for that purpose; such handkerchiefs should not be thrown into the ash bin but burned by the chambermaid. After a room has been occupied by a consumptive, it should be carefully cleansed before another guest is assigned. Where the rules already laid down have been observed, wiping the walls, floor and furniture with a sponge dampened with a germicide solution, whisking the rugs with same solution, and sending the sheets, blankets and pillow cases and counterpanes to the laundry, will be all that is necessary. Where, however, no care has been observed and the consumptive has been careless about spitting on the floor, or into linen, silk and muslin handkerchiefs, or where the bed clothing has been visibly soiled with broken down tubercular tissue, it will be necessary to carefully rub the walls with fresh bread and then wash them with a strong germicide solution, to wash the floors and furniture with the same strong solution, to have all the bed linen and blankets thoroughly boiled and to have the rugs and other articles which can neither be subjected to strong germicide solution nor boiled, sent to a renovating place and steamed."—*Annals of Hygiene*, September.

PRACTICAL NOTES.

Silico-Fluorid of Mercury.—This salt has been recommended as being twice as energetic as corrosive sublimate as an antiseptic. It is far less poisonous than the latter salt, hence it deserves attention. It is used in aqueous solution 1 to 1,000.—*Pharm. Era*, September 3.

Acrocyanosis.—Crocq described at the recent Neurologic Congress in France a disease he has observed in two hysteric young women, which he calls acrocyanosis. It resembles Raynaud's disease and also Charcot's blue edema, yet it is distinct from both. Raynaud's disease ebbs and flows, with severe pains, a tendency to the formation of gangrenes and phlyctenæ, and a loss of sensibility in the skin. Acrocyanosis on the other hand, is a permanent condition, without severe pains or the other symptoms above. Charcot's blue edema is accompanied by paralysis, paresis or contractions, which are all absent in acrocyanosis. The three diseases all originate in disturbances of the nerve centers, but he considers the latter essentially a hysteric vasomotor phenomenon.

Plastic Surgery.—The *Jour. des Sciences Méd. de Lille* for August 15 describes a case where a cutaneous epithelioma on the ankle, 12 by 9 centimeters, was removed, a pear-shaped living flap from the thigh sutured in its place and the leg flexed against the thigh in a plaster cast. A small flap cut above was twisted around to cover the center of the open space, leaving only a couple of unimportant spaces at each end uncovered.

Treatment of Measles.—Dr. C. S. Merriman says that when the eruption does not appear or when it recedes we have complications. In such cases he employs the following treatment: Take a flannel blanket, wring it out of water as hot as the hand can bear and wrap patient up in this, with cold cloth on the head. Keep him in the pack about twelve or fifteen minutes; then transfer him to a dry blanket and allow him to cool gradually. This brings the eruption to the surface and relieves the mucous and serous membranes. If necessary give antipyretics for the fever and sedatives for the cough. He never has complications when this line of treatment is used. When there is bronchial cough he prescribes a combination of terpin hydrate and codeia sulphate made into an emulsion with syrup of acacia.—*K. C. Med. Ind.*, September.

Further Experiments with Serum Treatment of Cancer.—The *Revista Chilena de Hijiene*, No. 6, describes at length the treatment of a number of cases of inoperable cancer with serum from asses and goats that had been inoculated with cancerous tissues. The results were not as favorable as those obtained by Richet and Hericourt, the only effect being the improvement of a few symptoms, the most notable, the relief from pain. The discharges also ceased to be fetid. The general health improved at first, but afterward grew worse, with increased emaciation and cachexia. The other symptoms were unaffected. He injected usually 2 c.c. every other day, or less frequently, never more than 5 c.c. on account of the tendency to produce fever. He adds, with the odd Spanish inverted interrogation point: ¿ will larger doses secure better results? And he remarks that our impotency in these malignant cases, fully justifies these hazardous experiments.

Use of Forceps in France and Germany.—An article in the *Revue Int. de M. et de C.*, August 10, compares the statistics of the use of the forceps in obstetric cases in France and Germany, greatly to the advantage of the French methods. The superiority of Tarnier's forceps which are used in France, to Nœgele's which the Germans use, is one cause of the better results obtained. But the chief cause is the method of applying the forceps. In France the head of the fetus is seized symmetrically from ear to ear, the axis of the blades corresponding to the occipito-mental diameter, except in superior strait cases. The practice in Germany is the reverse of this. The forceps are applied symmetrically to the axis of the pelvis, and the fetal head is seized as happens to be convenient. The statistics show the results in the frequent lacerations and elevated fetal mortality.

Treatment of Phlyctenular Keratitis.—Dr. M. F. Coomes commends a solution of eserin as the best remedy. It is a myotic, contracting the pupil closely, and by so doing excludes the excessive amount of light, and reduces intolerance to a minimum. In addition to the mechanical action upon the pupil, it also produces contraction of the capillary blood vessels, stimulating them, and bringing about a healthy condition of the ulcer, which can be accomplished by no other agent so readily.

The solution need not be strong, two grains to an ounce of water being quite sufficient for most cases. And its application should be made twice a day, and if there is great intolerance of light, three times a day. He advises no other local application.—*Louisville Med. Mo.*, September.

Chronic Cystitis.—Dr. S. B. Johnson used the following formula in a severe case of chronic cystitis:

℞. Syr. yerbæ santæ 32.0
Syr. simplex 64.0
Eucalyptol 16.0
Aquæ destil 16.0

M. S. Shake well. Dose, a teaspoonful every two hours.

The patient was unable to pass his water without the aid of a catheter, and his urine was loaded with mucus. In the course of a week he began to pass his water without the aid of the cathether. In addition to the use of the eucalyptol he gave the following to keep the urine alkalin:

℞. Comp. infusion buchu 470.0
Bicarbonate soda 4.0
Bromid of potassium 7.5

M. S. Shake well. Dose, a wineglassful every four hours.

Under this treatment the patient recovered, and he attributes the rapid improvement to the action of the eucalyptol.—*Northwestern Lancet*, September.

Absorption of Iron by the Organism.—Gaule's interesting experiments to determine the method of absorption of iron in the organism are described in the *Deutsche Med. Woch.*, No. 19. They confirm Hall's statement that the absorption occurs in the duodenum alone, and not in the stomach or small intestine. Not only organic compounds of iron are absorbed, but also the inorganic, like ferric chlorid, but they have first to be transformed into an organic compound by combining with certain substances in the intestine. The iron is absorbed by the epithelium of the duodenum first, and then by the central lymphatic vessels of the villi. As early as two hours after the iron is administered, the quantity of iron in the pulp cells of the spleen is much larger than normal. The process of absorption of the iron is perfectly normal, and does not require any change in the usual processes.

Treatment of Gout with Piperazin.—Dr. Hager describes his victory over the gout in his own person, in the *Pharm. Post*, No. 30. After various experiments he found that he had conquered his old enemy with piperazin taken three or four weeks, in fractional doses, with soda water. After the swelling and pains had disappeared, he continued with diminished doses a while longer, 2.5 to 3.0 gr. per diem. The remedy seemed to lose its diuretic power in the course of two or three weeks, and he increased its efficacy at such times by supplementing it with a diuretic, using a decoction of bean pods for the purpose, taken in weak coffee, or with milk and the piperazin, or with the piperazin alone. There were no inconveniences at any time from its use, even at 3 grams a day continuously.—*Therap. Woch.*, August 23.

Pain after Laparotomy.—Dr. Byron Robinson has reoperated on a number of cases for annoying abdominal pains which massage, electricity, etc., did not relieve and concludes that the pain in peritoneal adhesions is due to the checking of the peristalsis in a viscus with a long pedicle and an active peristalsis of the sigmoid flexure, loops of small intestines, Fallopian tubes and bladder. The chief site of the adhesions is the cut ends of the Fallopian tubes or some point of the abdomen denuded of its peritoneal endothelia. Adhesions about fixed organs, as the liver, spleen, flexures, etc., do not induce pain, as their limited rhythm is not materially checked. In reoperating we should free all the highly peristaltic organs and cover up with peritoneum all exposed mucosæ or denuded endothelia.—*Memphis Med. Monthly*, September.

Treatment of Tuberculosis with Baths of Rarefied Air.—Vergara Lope and Herrera of Mexico have constructed an apartment where they give baths of dry, equable and highly rarefied air to tuberculous patients. Although they consider it merely an attempt, its success fully justifies further experimentation on a larger scale. They conclude a modest report of what they have been able to accomplish in relieving congestions, strengthening the lungs, etc., with these words: The desideratum is to keep the patients night and day, and for a sufficient length of time to really accomplish a cure (not merely an occasional bath as with our present accommodations), in a highly rarefied, dry and even atmosphere, such as is not to be secured at any known natural point. (The variations in temperature in the mountains destroy much of the therapeutic effect otherwise obtainable there.) One chamber is not enough, but a whole series, fitted up with every comfort and hygienic appliance, and rendered attractive in every way to the patients in their voluntary confinement.—*Revista Quincenal*, July 15.

Serum Therapeutics.—Roger concluded his important address on this subject at the recent French Congress of Internal Medicine with these words: In spite of such numerous trials and investigations, serum therapeutics has only produced actually undeniable effects in the treatment of diphtheria. It has proved less efficacious in man than we were led to expect from our experiments on animals. Animals are easily inoculated with disease, while man succumbs only if there is some morbid predisposition or lack of tone in the organism. The serum only works, besides after a certain period of incubation, and even if administered in time, we are not sure of obtaining a cure as the serum is impotent in regard to the concomitant auto-intoxication. This is the reason why it is impossible to deduce conclusions as to its effect on man from the effects obtained on animals. This is why the experiments in the laboratory are more successful than in the clinics, and why the old methods are not to be abandoned for the new. According to my opinion serum therapy is not destined to supplant the other methods; it should only be considered another weapon to use concurrently with the rest. This rule applies even to diphtheria. In a case of puerperal fever, no matter how great our confidence in serum treatment we should never trust to it alone, but employ all our known weapons to combat the phenomena produced by multiple causes, with means we know to be multiple in their effects. Although it is hazardous to forecast the future, we do not believe that serum therapeutics is destined to revolutionize the art of healing. Its indications must be defined and its use combined with other methods. This is the road for the clinicians to follow. At the same time the experimenters will be improving the antitoxins and eliminating the useless or harmful substances that accompany them. These are the tasks of the immediate future, and when completed new progress will have been accomplished in medical science and new benefits accrue to humanity.

The Effect of Erysipelas Toxins upon Malignant Growths.—Drs. L. A. Stimson, A. G. Gerster, and B. F. Curtis, at a recent meeting of the New York Surgical Society, submitted the following report upon the use of erysipelas toxins in the treatment of malignant disease: "We believe that in the instances of apparent cure or marked improvement the correctness of the diagnosis is open to doubt. We therefore submit: 1. That the danger to the patient from this treatment is great. 2. Moreover, that the alleged successes are so few and doubtful in character that the most that can be fairly alleged for the treatment by toxins is that it may offer a very slight chance of amelioration. 3. That valuable time has often been lost in operable cases by postponing operation for the sake of giving the method of treatment a trial. 4. Finally, and most important, that if the method is to be resorted to at all, it should be confined to the absolutely inoperable cases."—*University Med. Magazine*, September.

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INFORMATION WANTED.

It would greatly facilitate the prompt delivery of the JOURNAL to those members of the ASSOCIATION living in large cities, if they would kindly furnish this office with their street address in those cases where it is omitted from the wrapper of their JOURNAL, as we have been notified by the postmasters of the larger cities that second-class mail matter not having street address, would be placed in the general delivery to await call.

SATURDAY, SEPTEMBER 19, 1896.

THE EXAMINATION OF SCHOOL CHILDREN'S EYES.

An examination of the eyes of 8,125 London school children has just been completed by MR. CARTER, and sent to the Education Department; when we consider the methods of the examination we are surprised to learn that only 39.15 per cent. were possessed of "normal vision." We say in view of the methods of examination, because it is of this aspect we would suggest a qualifying word. It seems from the abstracts of the report at hand that to the teachers was allotted the task of separating the sheep from the goats, in other words they were to ascertain by prescribed methods the pupils that had "normal vision." Those thus diagnosed were apparently not further considered by the ophthalmologists. The fact will doubtless provoke a smile from American oculists, at least from every one worth considering. What public school teacher is capable of diagnosing the refractive condition of a pupil's eye? Having diagnosed "normal vision" how utterly meaningless is the fact! It is as devoid of significance as the findings of the divining rod. Because, no mydriatic being used, it is, as we all know, precisely the cases that have considerable refractive errors covered up by the accommodation, leaving "normal vision," that have the most decided reflex disturbances, headaches, denutrition, etc. The smile of the skilled refractionist becomes something very different from a smile when he thinks of the astigmatism uncorrected in that 39.15 per cent. of normal eyes! And then the remaining 60 per cent., if we had a mydriatic examination of these, of what interest and value it would be to know accurately the precise refractive errors and muscle-balances! Astigmatism was, of course, found to be extremely rare, whilst with us the eye without astigmatism is almost a wonder. "Slight and moderate degrees of hypermetropia are the most common conditions, and the defect, *if it is to be called a defect*" (italics ours) "is scarcely sufficient to require the use of glasses, and would not be likely to lead to more than a sense of weariness in children who were underfed or taught in badly-lighted schools." This is not ludicrous; it is pitiable! Precisely when food is scarcest, and the lighting the worst, then is the greatest need of relieving the eye from strain. We are glad to learn that there is no evidence of an increase of myopia in the London children.

Another noteworthy finding is much amblyopia not to be accounted for by errors of refraction. (Again we must recall that the examinations were made by the ophthalmoscope and without a mydriatic.) This amblyopia is accounted for by the fact that city children are not exercised in seeing distant objects, but only such as are not farther than the street-width or room-dimensions! Our "ophthalmic surgeons" find other causes for amblyopia, but our English confrères smile at our testings of the ocular muscles and of astigmatism. It should be recognized as a fundamental principle that all examinations of school-children's eyes are utterly valueless to science, and the conclusions drawn from such testings are equally valueless or positively misleading, even concealing the truth, that are not carried out by means of a mydriatic, that do not include a precise estimate of the astigmatism, the anisometropia, and the muscular incoördinations or balances.

MEDICAL EXAMINERS AND MEDICAL TEACHING.

During the past seven years the course of study in the majority of the Medical Schools of the United States has risen from two years of five months each, to four years of at least six months each. This advance has not been brought about by the action of any one force, but it has been accomplished by the coördinate action of the various State boards of health and by the coöperation of the better class of medical schools in the Association of American Medical Colleges. This increase in time has, in many schools, been accompanied by a greater advance in the methods of teaching and in the scope of the curriculum. The laboratory method of teaching for histology, pathology and various other subjects has been generally adopted. The amount of laboratory work and its quality has not, however, been just what could be desired. In some schools only a few hours a day for a very brief period is required, while in others a large amount of time is spent in the laboratory, but the pedagogic method of presenting the subjects to the

students has not always been carefully considered. The order of the laboratory has been frequently neglected and students have been allowed to form extravagent and slovenly habits and sometimes even have been instructed in erroneous methods of observation and faulty methods of reasoning. The shiftless habit which some teachers practice of preparing histologic specimens, mounting and distributing them to the class instead of requiring each student to catch, kill and prepare his specimens for himself, is all too prevalent. The method of requiring drawings of histologic specimens to be made is desirable and correct, but to permit the use of illustrated text books to define characteristics which poorly prepared specimens fail to discover, is pernicious. Many institutions with clinic advantages have neglected to pay that attention to the conduct of clinics which the real needs of the students demand. The students themselves look for tragic operations and crowd the laparotomy room while they neglect the tedious work of percussion, palpation and auscultation in the quiet of the dispensary. Lecture work still continues to occupy the most prominent place in the course and consume the largest amount of time. The medical library has not yet been utilized as an engine of medical education and most of our graduates still go out with little or no knowledge of the use of the storehouses of medical thought and experimental investigation.

It is probable that the length of the course of study has been sufficiently extended and that the work of the next ten years for medical education will be directed to improved methods of teaching. It is necessary now for the colleges to combine and demand of the State examining boards a rational, flexible and practical examination and one which will bring to the front those men who have most studied the healthy human body, the diseased body and the methods of preserving health and treating disease. Written examinations only will not do this. They encourage pedantry, cramming and a "cuckoo" style of recitation. Actual examinations at the bedside with all the paraphernalia of diagnosis and therapeutics must be substituted at once for the examination at the table. It is not enough to say that this would be expensive and would consume too much of the examiner's valuable time. The examinations are not designed for the comfort of the examiner, but rather for the improvement of the education of students. The great expenditure of money and labor required of the medical schools by the four years' course must be seconded by equal expenditure by State boards. When such examinations are instituted it will be easy to separate the wheat from the chaff and to designate those medical schools that give a real medical education. Until this is done any crowd of young quiz masters can outdo the best equipped college and the most experienced faculty.

THE TEACHING OF MATERIA MEDICA AND THERAPEUTICS.

Materia medica has been the *bête noire* of the medical student. The study of its dry and categorical details has been largely a matter of mental gymnastics. In its teaching, instructors have sought to make it more acceptable to the mental palate of the pupil by a liberal admixture—with the uninteresting story of drug origins, pharmaceutic preparations and dose tables—of therapeutic facts. Until recently the text books have adopted the confusing method of merging the treatment of these two, usually allied, but deservedly distinct topics. Their greater dissociation is desirable for the better development of each subject and for the adaptation to each of its own proper method of study.

Dr. HENRY M. BRACKEN, of the University of Minnesota, in an article printed recently in the *New York Medical Journal*, has been the first, publicly, to recognize the necessity for a departure from the customary mode of instruction in these branches. His recently published work, "The Outlines of Materia Medica," is in evidence to prove the possibility of their divorce without damage, at least, to the teaching of the primary subject. It does not meddle, by any serious intention, with the question of therapeutics. Its author holds that these branches, wisely associated under a single chair, have, nevertheless, their proper places in different parts of a medical course. His claim that a certain amount of knowledge of general chemistry and physiology should be pre-attained by the beginner in materia medica is in reason. He adopts, in the first instance, the chemic and biologic arrangement in the study of drugs, the only arrangement which fits the laboratory method of teaching. For materia medica must come into line with histology, anatomy, physiology, chemistry and pathology as laboratory studies. The day of the didactic lecture in the treatment of such a topic has gone by. Of no subject is the lecture a more awkward vehicle of instruction.

The student of materia medica should be, to an elementary degree, a pharmacist. He should see and handle crude drugs and their eligible preparations. He should understand the principles of compounding by practice in the art of preparing materials and putting up prescriptions. Then, and not until then, should he be taught the physiologic action of drugs. And here the laboratory idea again comes forward. The pupil should observe, by illustration, the methods of studying physiologic action in animals and, so far as possible, in men. He should learn the limits of comparison between physiologic action in the human and in other forms of life. All drugs should be recognized with caution—not to say suspicion—whose physiologic effects have not been ascertained or can not be scientifically determined. Such a principle

would tend to the eventual elimination from the materia medica of a large mass of remedies which have ceased to have any clinical importance and never possessed any real therapeutic value. It would go far toward checking the modern heresy of therapeutic nihilism if the materia medica were once and forever purged of these discarded and impotent agents.

Having accomplished this riddance, it would be equally effective, in the encouragement of therapeutic faith, in these days of commercial enterprise and pseudo-scientific ingenuity among the manufacturing chemists, if the laws should require the submission of all new remedial agents to a bureau of scientific investigation connected with a National or with State boards of health. It is remarkable that we should so long have persisted in taxing the student of medicine with the command of weapons, which, in his practical armamentarium, he will never use—which his teacher himself would never employ. Is it any wonder that the graduate, in his mental confusion of drug values, should fall back upon patent preparations or proprietary formulæ?

In a later year therapeutics has its place. It should be taught as an independent study, with its relations to the physiologic action of drugs well elaborated from the laboratory standpoint and its clinical side developed, less in the lecture room than at the hospital bedside and in the dispensary clinic.

By these methods materia medica and therapeutics may be effectively taught and will cease to be classed, as they are now, among the bugbears of the curriculum.

THE VITAL AND PSYCHIC COMPLICATIONS IN CASTRATION FOR PROSTATIC HYPERTROPHY.

In the current (September) issue of the *Annals of Surgery* there appears an interesting paper by Dr. A. T. CABOT on "The Question of Castration for Enlarged Prostate," in which the writer takes, on the whole, an unfavorable view of the operation as compared with the older one of prostatectomy. He finds from his analysis of the statistics that, in the matter of mortality, it (castration) has a less favorable showing than prostatectomy, and conjectures that with later statistics reflecting the latest improvements in technique this disadvantage would be still more in evidence. Prostatectomy has also the further advantage of allowing a thorough examination of the bladder and the consequent discovery and relief of other, perhaps unsuspected, morbid conditions. Its disadvantages are the longer confinement and the possibility of fistula. It is applicable, he claims, to more cases than is castration, which is apparently most efficacious in large, tense prostates compressing the urethra, and is of little use in myomatous and fibrous enlargement, while the older operation is, in the hands of a skilful operator, applicable to the relief of any and every form of prostatic obstruction. It is, moreover, especially indicated whenever an inflamed condition of the bladder makes drainage desirable.

Dr. WHITE, the proposer of the operation and one of the editors of the *Annals*, takes up the question of Dr. CABOT'S paper in what seems to be a very ably written editorial and warmly combats some of his conclusions. As regards the mortality of castration, which it would seem Dr. CABOT'S statistics make unduly high, he seems clearly to have the advantage of the argument, especially as regards the deduction that the disparity would increase with improved technique in prostatectomy, for he shows by more recent statistics a decided reduction of the mortality, and he further shows from an analysis of Dr. CABOT'S own list that certain fatal cases are included in which the final result certainly ought not to be attributed to the operation. The mortality of such an operation as castration certainly ought to be less, it would seem, than that of prostatectomy. As he says, Dr. CABOT'S figures are, at any rate, rather small to base such positive statements upon.

As regards the utility of castration in myomatous and fibrous tumors, it would also seem that he had at least as good an argument in its favor as has Dr. CABOT against it, and he shows that the evidence as to the tendency to relapse is not adequate to confirm that author's conclusions. One point mentioned by Dr. CABOT, however, he neglects—that is the question as to the effects of castration on the general vitality, which CABOT claims is probably to some extent reduced by the removal of the organs. That these organs are absolutely without function at an advanced age is most certainly untrue for many individuals, even as regards their special reproductive utility alone. It would not seem improbable therefore that there might yet occur something at least of that general systemic reaction that is so marked in the younger individuals after castration, and that this might manifest itself in a more rapid failure of the vital energies and a quicker succumbing to the onset of senile changes. There is probably a germ at least of truth in the theory of BROWN-SÉQUARD as to the invigorating influence of the testicular secretion; certainly the experimenters in organo-therapy have not lost faith in it altogether. The organs do not atrophy completely, even after their special sexual function has apparently long been lost, and it is only reasonable to assume that they still have some utility in the organism.

The large proportion of cases mentioned by Dr. CABOT in which mental disturbance followed the operation is also noteworthy, even if it is not directly attributable to the character of the operation. We might perhaps expect some more emotional disturbance from an operation of this kind, associated as it is with the idea or recollection of the changes that follow it when performed in youth, and this psychic

element is not altogether a negligible matter. It may even have its share in causing the excessive (as it would appear) mortality that has followed so slight an operation.

While Dr. WHITE appears to have fairly replied to the other objections to the operation, this one is left unanswered, and it may not be an insignificant one. Time, of course, will be required to determine its full value and importance.

THE LABOR MOVEMENT AND MEDICINE.

The recent celebration of labor day throughout the country and the great extension and popularity of the so-called labor movement suggest certain questions that may become practical ones in the near future. Every one sympathizes with the desire of the working classes to improve their condition in all legitimate ways and the usefulness of labor organizations under judicious management need not be questioned. That their managers have not always been judicious is evident enough, but that is perhaps to be expected and it is to be hoped that more wisdom may guide their actions in the future than it has in the past. The question that concerns us most especially is that of their extension into certain lines of occupation that have hitherto been free from these complications. Medicine, being a liberal profession, is in no danger of falling into this line; the laws regulating practice are matters of public hygiene, not of private interest, though the medical defence associations that seem to be popular in Great Britain at the present time have some general resemblance to trades union or labor methods. There would, it may here be said incidentally, be no better object lesson of the evils of certain labor methods than a sympathetic strike of doctors, leaving their patients to go, in many cases literally as well as metaphorically, to the devil, according to orthodox beliefs. The nearest approach to this that is likely to occur is what happened, we believe, in England not long since, when the lay management of a certain hospital became so obnoxious that physicians refused to serve on its staff. Such an event would, however, be more the result of the individual expression of professional self-respect than of any combination analogous to trades organizations. There are, however, auxiliary to medicine certain occupations the followers of which can not be expected to be always governed by the high professional motives that are assumed to control regular physicians, and it is entirely possible to conceive of what we denominate labor troubles arising in their ranks. A general sympathetic strike in very many employments could easily have the most disastrous effects on the public health, a railroad strike involving the milk supply for only a few days in a great city would cause a terrible increase of infant mortality, and many other like instances and effects can be easily imagined. To come down more closely, however, to strictly medical employments, a strike of hospital employes, especially if in connection and alliance with a general strike, would be most disastrous; yet it is a perfectly conceivable possibility. In certain hospitals this contingency is calculated upon and all employment is regulated by contracts requiring notice and other precautionary provisions.

It is not to be supposed that public opinion would support any long extended movement that would have gross inhumanity as its consequence, and it is to be hoped that no labor combination would really deliberately attempt to injure or prejudice the welfare of the helpless and the invalid. It must be remembered, however, that the greatest wrongs are committed not through deliberate malice, but by inconsideration and recklessness, and the inability to see beyond an immediate desired end.

CORRESPONDENCE.

Physicians' Cards.

ANDERSON, S. C., Sept. 5, 1896.

To the Editor:—Is it contrary to the Code of Medical Ethics or the by-laws of the AMERICAN MEDICAL ASSOCIATION to use on a business or visiting card the words "Diseases of Women and Children," or any other words indicating a special line of practice? If not those words, is the word "Gynecologist" admissible? For instance, "Dr. Leptandrin, Cormes, Florida, Diseases of Women and Children."

Awaiting your reply, am very truly yours, J. O. W.

ANSWER: The reading of the Code explicitly says: "It is derogatory to the dignity of the profession to resort to public advertisements, or *private cards*, or hand bills inviting the attention of individuals affected with particular diseases, etc."—Vide Code of Ethics, "Of the Duties of Physicians to Each Other and to the Profession at Large."—Art. 1, Sec. 4. Now this is the exact language of the Code, and is in all well regulated societies regarded as the safest plan to follow.

The Bicycle.

IRONTON, OHIO, Aug. 30, 1896.

To the Editor:—I was greatly pleased to see so sensible an article in the last JOURNAL as that written by Dr. Brown of Birmingham. That the bicycle has come to stay is an assured fact. That more people are going to use them is another assured fact. That we, as physicians, should accept these as facts and devote more time to the "wheel and its effects" is also quite as much a fact. For the masses the wheel has come nearer annihilating space than anything that has so far been invented. Until we have a practical, low-priced flying machine people will continue the use of the wheel despite the fact that it produces pelvic troubles. I do not think, however, that it will produce as many of them as the same amount of horse-back riding. It is no more fair to call the hump-backed, ewe-necked, pop-eyed scorcher the typical bicycle rider than it is to compare the goggle-eyed thing that rides through Central Park to one of Buffalo Bill's riders in his Wild West Show. As long as we have in use the prevailing style of saddle we will have "the hump" because that is the easiest position. When we can have a seat that is flat, or nearly so, and receive its support from the center instead of the ends and has no prominent horn, then, and not until then, will we have what is to my mind, the

correct position. I have had one case of ruptured urethra and several cases of vesical irritation under my care, but have never failed to promptly give relief to the latter when the proper saddle was prescribed. When a fond mother asks me if I think her daughter can ride a wheel I say, "Yes, if the saddle is right." When a man asks me if he can ride a wheel I say, "If you get the right saddle and then use a little common sense." There are many good saddles now being manufactured and if we will use our influence in the right direction "the hump" and vesical irritation will soon be things that are not charged up to the bicycle. I have been a constant user of the wheel for three years, averaging about fifteen miles a day, the year round. Being compelled to investigate the saddle question, I went into the subject a little more seriously than if some one else were the patient, but since having the saddle right I feel as much freedom from pain and danger as if I were riding in a carriage. Prescribe the wheel for your patients, "but see that the saddle is right."

LESTER KELLER, M.D.

Diagnosis of Knee Joint Affections.

MINNEAPOLIS, MINN., Sept. 12, 1896.

To the Editor:—While it is usually a comparatively easy matter to make a diagnosis in tuberculosis of the knee, it is possible to be mistaken, as illustrated by the following cases:

Case 1.—A young man 19 years of age came to the writer with a knee which had been pronounced tubercular by a number of physicians who had seen it. It had already been treated by iodoform and iodin injections. He gave a history of having sustained a slight injury about a year before the writer saw him, and some time afterward the joint began to swell and became painful.

When he came to me he had an enlarged white joint with enlarged veins. There was flexion, atrophy, muscular spasm and severe pain which was much worse at night. He was put in bed and extension made by means of weight and pulley. In about a month his pain was relieved, the deformity overcome and the swelling seemingly diminished. At this time there was no question in the writer's mind but that the knee was tubercular. A plaster cast was applied and the patient allowed to go out on crutches.

After a very few weeks the pain returned; the swelling increased and the patient returned to bed, where he remained until he died three months later from an osteo-sarcoma. At that time my belief was that the sarcoma was secondary to tuberculosis, but the probability is that it was sarcoma from the beginning.

Case 2.—A lady, 49 years of age, was brought to me, who had a knee which was decidedly enlarged and which had been pronounced tubercular by many of the eminent surgeons of three different cities. An independent diagnosis of tubercular synovitis was made and excision advised. There was local swelling and heat, and what seemed to be a tubercular abscess in the popliteal space. There was flexion and tenderness upon pressure, but comparatively little pain. The family physician, acting upon the advice of a consulting surgeon, had tapped the joint some time before, drawing off quite a quantity of serous fluid, after which he injected iodin. The patient accepted the advice of myself and all the other surgeons (except one who wanted to try iodoform injections) and requested me to excise the joint. The patient had a hemophilic joint, and died one week after the operation, from acute anemia.

These rare and unexpected cases may occur in any joint, but the above are the only cases occurring in the writer's practice.

JAMES E. MOORE, M.D.

Work for the Association.—Let every member get a new member before the close of the year! Try it now! Let us reach the ten thousand mark in the semi-centennial year.

NECROLOGY.

ALEXANDER BUCHANAN, M.D., New York City, September 2, from complication of diseases from which he had been suffering for several years. He went to Sands Point early in the summer, but becoming worse he was taken to the Post-Graduate Hospital where he died. Dr. Buchanan was born in Glasgow sixty-five years ago. He came to New York in 1856, but returned to Scotland to study medicine and graduated from the University of Glasgow in 1860. In 1862 he graduated from the New York Medical College. He was a Fellow of the Royal College, of Physicians and Surgeons, Glasgow, a member of the New York State and County Medical Associations and a member of the New York County Medical Society.

ABRAHAM LIVEZEY, M.D., at Yardley, Pa., August 31. He was at one time professor of obstetrics at the Woman's Medical College of Philadelphia. He had been suffering for thirty years from lupus of the face. He was born in Solebury township, Pa., in 1821, and graduated from Princeton College in 1842, and from Jefferson Medical College in 1845.

ASBURY M. DAY, M.D. (Albany Medical College, Albany, N. Y., 1860), at Farmington, Del., September 4, aged 60 years. ——William K. Conaway, M.D. (Jefferson Medical College, Philadelphia, Pa., 1890), of Ridgeley, Del., September 4.

CHARLES LOTIN HILDRETH, M.D., of Southampton, N. Y., who was gaining prominence among the younger poets and writers of this country, died at the residence of his wife's sister, Mrs. Mary Kyle Dallas, on August 12. He was 40 years old and leaves a widow who is an authoress. There are no children. Dr. Hildreth's death was due to nervous prostration brought on by the intense heat of the week previous.

MATT YOUNG, M.D., the oldest physician of Ashland, Ky., died August 26.

J. L. BENSON, M.D., aged 79, died at his home in Nobles ville, Ind., September 8. He was a surgeon of volunteers during the war, and had practiced medicine for fifty years.

NEW INSTRUMENTS.

A NEW SELF-RETAINING NASAL SPECULUM.

BY J. R. STRAW, M.D., ASHLAND, WIS.
Late House Surgeon Baltimore Eye, Ear and Throat Charity Hospital, Baltimore, Md.

I have realized, as has I presume every other rhinologist, the need of an absolutely self-retaining nasal speculum. To obviate this, about two years ago I devised the instrument

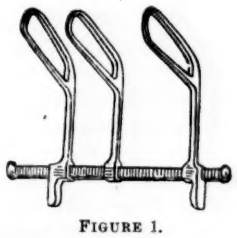

FIGURE 1.

illustrated in the accompanying cuts. As an inventor is always an enthusiast on his own devices, I have hesitated to recommend it to the profession, fearing it would prove, as many other instruments, useless for its designed purpose.

Knowing this fact, I have used it for the last two years, and am thoroughly satisfied as to its merits and practicability, especially for operations on the nose.

Cut No. 1 represents the instrument with fenestrated blades, consisting of three, on a straight, square bar, those on either end being movable, the central stationary. This latter or central blade is placed on one side of the septum, while the dilating blade on the opposite side of the nose to be dilated, is

brought firmly up against the septum and then, on the Lennox-Browne principle, locks itself. These two blades acting as a clamp on the septum, can not possibly slip; the other blade is then pressed out against the alæ of the side to be dilated, and also locks itself on the same principle.

Cut 2 represents the instrument in situ.

FIGURE 2.

The instrument is also made with solid blades, which protect the parts especially when the galvano-cautery is used. If desired the middle blade can be made adjustable, so that it can be extended back to protect the septum for some distance if necessary, although the cut does not show this.

I have recently had one made with solid blades, which I find more satisfactory than the one shown in the cuts. The original instruments have been made for me by Guinand Bros. of this city.

SOCIETY NEWS.

The Watertown (N. Y.) Medical Society has reëlected the following officers for the ensuing year: President, J. M. Crawe, Sr.; vice-president, Gilbert Cannon; secretary, C. N. Bibbins; treasurer, J. M. Crawe, Jr.

The American Electro-Therapeutic Association will hold its sixth annual meeting at Boston, Mass., September 29-30, and October 1.

Address of the President, Dr. Robert Newman, New York City. "The want of education in electro-therapeutics in medical colleges."

Reports of committees on scientific questions:

On induction coils and alternators. Mr. A. E. Kennelly, Philadelphia, Pa.

On meters. Dr. M. A. Cleaves, New York City.

On static machines and condensers. Dr. W. J. Morton, New York City.

On constant current generators and controllers. Dr. W. J. Herdman, Ann Arbor, Mich.

On electrodes. Dr. C. R. Dickson, Toronto, Canada.

On electric light apparatus for diagnosis and therapy. Dr. J. H. Kellogg, Battle Creek, Mich.

Papers:

What can be done by means of the use of electricity to avoid surgical operations? Dr. G. Betton Massey, Philadelphia, Pa.

Electricity in chronic non-suppurative affections of the uterine appendages. Dr. F. Shavoir, Stamford, Conn. Discussion by Dr. G. Betton Massey, Philadelphia, Pa.

Electricity in the treatment of diseases of the throat and nose. Dr. O. B. Douglass, New York City.

Accidents and risks in the use of street currents. How far are they practicable and safe in the use of electro-therapeutics? Mr. J. J. Carty, E. E., New York City.

Electricity in the treatment of diseases of the larynx. Dr. W. C. Phillips, New York City.

Digest, showing the danger to patients and operators, the utter unreliability of fuse wires, resistance coils and incandescent lamps as a preventative of excess flow of current into patient. The liability of and danger due to the crossing of operator's wire, by wires carrying high tension current, both direct and alternating. Mr. John J. Cabot, E. E., Cincinnati, Ohio.

Experiments upon the effects of direct electrization of the stomach. Dr. Max Einhorn, New York City.

Electricity in diseases of the stomach. Dr. David D. Stewart, Philadelphia, Pa.

The static current of the post-apoplectic state. Dr. John Gerin, Auburn, N. Y.

The electric principles generally used in medical treatment. Prof. William L. Puffer, Boston, Mass.

The relations of physics to physiology. Prof. A. E. Dolbear, Tufts College, Mass.

Electro-therapy in the treatment of the nervous. Dr. W. S. Watson, Fishkill-on-Hudson, N. Y.

The role of electricity in the treatment of uric acid diathesis. Dr. J. G. Davis, New York City.

Some observations in electro-therapeutics. Dr. D. R. Brower, Chicago, Ill.

The physics of the production of the X rays. Mr. Edwin Houston, Philadelphia, Pa.; Mr. A. E. Kennelly, F.R.A.S., Philadelphia, Pa.

Treatment of strictures by electrolysis *versus* any other treatment. Dr. F. H. Wallace, Boston, Mass.

"The Newman method of urethral electrolysis." Its advantages and reasons why some operators fail. Dr. Francis B. Bishop, Washington, D. C.

Faradism in gynecology. Dr. R. J. Nunn, Savannah, Ga.

The motor dynamo—adapted to electro-therapeutic work. Dr. W. J. Herdman, Ann Arbor, Mich.

The application of electricity to surgery. Dr. J. W. Herdman, Ann Arbor, Mich.

A summary of the ultimate results in eighty-six fibroid tumors, treated by the Apostoli method. Dr. G. Betton Massey, Philadelphia, Pa.

Some experiences and experiments in the construction of high tension coils and electrodes. Dr. Frank W. Ross, A.M., Elmira, N. Y.

Electricity considered in its relation to surgical gynecology. Dr. O. S. Phelps, New York city.

A clinic report of case of rectal phlebitis treated with galvanism. Dr. D. B. D. Beaver, Reading, Pa.

On the electro-therapeutics of the constant current. Mr. A. E. Kennelly, F.R.A.S., Philadelphia, Pa.

The New York State Medical Association will hold its thirteenth annual meeting in New York City, October 13, 14 and 15.

Address by the President, Dr. Darwin Colvin. "Medical expert testimony."

The technique of intubation in children, some remarks on the time for operation and after treatment. Dr. Thomas J Hillis, New York County.

Functionless organs, are there any? Possible use of the appendix vermiformis. Dr. Nelson L. North, Kings County.

The elongation of retracted muscles in club foot. Dr. T. M. Ludlow Chrystie, New York County.

Special report on Criminology. Dr. Austin Flint, New York County.

Brief comments on the materia medica, pharmacy and therapeutics of the year ending Oct. 1, 1896. Dr. E. H. Squibb, Kings County.

Discussion on Surgery: "Prostatic enlargement."

The discussion will be opened by Dr. J. W. S. Gouley, New York County.

The treatment of fecal fistula with reports of cases. Dr. Frederick Holme Wiggin, New York County.

Amputation of the lower third of the leg, with periosteal flap." Dr. Joseph D. Bryant, New York County.

Suture of the liver for incised wounds. Dr. Stephen Smith, New York County.

Operation for rectal hemorrhoids and prolapse by submucous ligature. Dr. Benjamin M. Ricketts, Cincinnati, Ohio.

The practical uses of Roentgen's discovery as applied to surgery; with illustrations. Dr. Reginald H. Sayre, New York County.

The treatment of otorrhea and its importance. Dr. Edward B. Dench, New York County.

The relation of nose and throat affections to diseases of the ear. Dr. Frank S. Milbury, Kings County.

Temperature as an element in prognosis. Dr. John Shrady, New York County.

Diphtheria. Dr. Thomas G. Acker, Westchester County.

On the treatment of inebriety. Dr. T. D. Crothers, Hartford, Conn.

Further remarks on the domestic test for albumin in urine. Dr. John G. Truax, New York County.

A successful plaster-of-Paris bandage cutter. Dr. Sidney Yankauer, New York County.

The physiologic deductions regarding the usefulness of so-called animal extracts. Dr. H. A. Haubold, New York County.

Two interesting cases of surgery of the kidney. Dr. J. E. Janvrin, New York County.

Recent investigations concerning eclampsia. William T. Lusk, New York County.

Puerperal eclampsia; studied with reference to pathogenesis and therapeutics. Dr. George T. Harrison, New York County.

The palliative treatment of cancer of the cervix and bladder in women. Dr. Nathan G. Bozeman, New York County.

Rare complications in two cases of hysterectomy. Dr. Ely Van de Warker, Onondaga County.

One point in the treatment of endometritis. Dr. William H. Robb, Montgomery County.

Address on surgery. Dr. Charles Phelps, New York County.

The vitality of cutaneous epithelium, with report of clinic observations in skin grafting. Dr. Zera J. Lusk, Wyoming County.

Acute amnesia. Dr. William D. Granger, Westchester County.

The duty of the public to the physician. Dr. William M. Bemus, Chautauqua County.

Supplementary notes upon tendon grafting and muscle transplantation for deformities following infantile paralysis. Dr. S. E. Milliken, New York County.

The medico-legal aspect of prison reform. Dr. Ernst H. Schmid, Westchester County.

Auscultatory percussion. Dr. Louis L. Seaman, New York County.

Druggist versus doctor. Dr. Henry B. Van Zandt, Schenectady County.

The peripheral neuralgias, traumatic and toxic. Dr. Thomas H. Manley, New York County.

The passing of venesection. Dr. H. D. Didama, Onondaga County.

A class of fatal cases, presumably due to intestinal ptomains. Dr. E. D. Ferguson, Rensselaer County.

PUBLIC HEALTH.

Report of the Bureau of Health of Denver, Colo.—Total number of deaths for August, 163; cases of phthisis contracted elsewhere, 24; death rate per 1,000 per annum, 13.04; death rate, excluding phthisis contracted elsewhere, 11.12; males, 86; females, 77.

Typhoid in Marion County, W. Va.—The typhoid epidemic in Marion County, W. Va., is spreading rapidly, the deaths multiplying daily. New England has 125 cases with an average daily death rate of 2. Every family in Riversville has one or more cases. Barnesville is in the same condition, five deaths occurring there on September 7. In consequence of the epidemic, the mining business is greatly disturbed and in some localities partially suspended.

Diphtheria and Typhoid in Chicago.—During the five days ending September 7 seventeen deaths from diphtheria were reported to the health department, a daily average of 3.4, or more than for any corresponding period since the epidemic of the winter of 1895–96. On September 4 seven people died from typhoid fever, breaking the record since 1892. The health department says the prevalence of the disease is due to impurities in the drinking water. During August of this year typhoid claimed sixty-four victims, against fifty-nine for the corresponding period of 1895. About five hundred cases are reported at present in the city.

The Old-time Enemies of Water.—A writer in *Hospital* has made a partial collection of the sentiments of the ancient as opposed to the virtues and values of that blessing, water. In fact, he says, there are very few old writers who say a good word in its favor. The "Venerable Bede" (673-735) prescribed the following general directions: "In June of a morning a cup of cold water, fasting; for July the same, but in October for sweetening the blood, for the expulsion of stone, and for healing the lungs, instead of water one should take the milk of goats or sheep and should not wash very often; in February one should foment the limbs; in August he should not refresh in cold water, but in January he should plunge his body into warm water." One or two writers only are concerned to maintain that, "when begun in early life it [water] may be pretty freely drank with impunity," and they quote the curious instance given by Sir Thomas Elyot in his "Castel of Health," (1534) of the Cornish men, "many of the poorer sort, which never, or very seldom, drink any other drink, be notwithstanding strong of body and like, and live well until they be of great age." Thomas Cogan, the medical schoolmaster of Manchester fame, confessed in his "Haven of Health," 1589, designed for the use of students, that he knew some who drank cold water at night or fasting in the morning without hurt; and Dr. James Hart, writing about fifty years later, could even claim among his acquaintance "some honorable and worshipful ladies who drank little other drink and yet enjoyed more perfect health than most of them that drank of the strongest." The phenomenon was undeniable, but the natural inference was none the less to be resisted. Sir Thomas Elyot himself is very certain, in spite of the Cornish men, that "there be in water causes of divers diseases, as of swelling of the spleen and liver." He complains oddly also that "it flitteth and swimmeth," and concludes that "to young men and them that be of hot complexions it doeth less harm, and sometimes it profiteth, but to them that are feeble, old and melancholy it is not convenient." "Water is not wholesome drink by itself for an Englishman," was the verdict of Andrew Borde who was author of a Breviarie of Health, and who died in prison (1549), probably for debt, since it was his habit to make humorous speeches at fairs and who originated the sobriquet of "Merry Andrew." But the most formal indictment against water is that of Venner, who, in writing in 1622, ponderously pronounces "to dwellers in cold countries it doth very greatly deject their appetites, destroy the natural heat and overthrow the strength of the stomach, and consequently confounding the concoction, is the cause of crudities, fluctuations and windiness in the body." But be this as it may, allowance must be made for the numerous marshes and lazy streams of the day, which may have unconsciously pointed the moral of avoidance. Besides too there may have been rampant the usual excuses for intemperance, and the growing favor of boiled, or for the matter of that, malt drinks. For even at this late date the ingenuity of man is not so much wasted upon a pure water supply as upon the varied flavors of the shops, especially during a heated term. There are no fears especially if the compound is well sugared, and defies an analysis of its elements. Man yearns for the toothsome rather than for the salubrious.

Safe Drinking Water for Travelers.—Mr. Budgett Meakin, a globe trotter of renown, writes for a London newspaper some cautions about drinking water away from home. He says: "It is my opinion that it is a practicable undertaking to procure good drinking water abroad, derived not only from personal experience in France, Spain, Italy, Switzerland, Germany, Holland, Belgium, etc., on the continent of Europe, but also

on all three of the other continents. Not that the liquid supplied has always been of ideal purity, but that I have never suffered in any way from having remained throughout staunch to my pledge to abstain from all intoxicating liquors as beverages, though I must confess to the charge of a somewhat immoderate use of drinking water. In almost every large town on the continent I have been surprised at the quality of the supply, regarding which I have invariably made inquiry of local people other than hotel proprietors, who can hardly be considered disinterested persons. Wherever there has been the least doubt, I have felt safer in using aerated water as likely to be the best procurable on the spot, or when doubt was strong, apollinaris or Hunyadi, or other mineral water. Then these were, very rarely, not procurable or insufficient, I have had my drinking water boiled for at least ten minutes and, if need be, filtered. In such cases tea has always been my stand-by, a small box full of a decent quality being always ready in my handbag. For filter, let me warn tourists against all stone or charcoal block systems after they are once clogged and work slowly. The block must then be thrown away and replaced by a new one. For this reasons the filters that can be recharged in a few moments with fresh charcoal, giving an absolutely new medium as soon as required are far preferable. All others soon become sources of danger instead of protection. The filtering when needed should precede the boiling, unless soup is required, though it is astonishing how often this natural order is thoughtlessly reversed. A pocket or small table filter can easily be carried in the lunch basket. It is well to inform the waiter on your arrival of your teetotal principles before he begins to recommend the cellar and to insist, on that account, on having the water bottles on the table and in the bed-room thoroughly well washed and refilled for your use. It is no use telling me that wine is purer, for I have seen how wine is made, and have trodden the wine press myself in Spain. When one is driven by thirst to doubtful water the best plan is to rinse the mouth well and gargle, or even to wet the face, neck and hands as well. Careful mouth-washing after rich food is an invariable ally to the total abstainer, and is invariably practiced by the Mohammedans, the abstemious races of India and many others. Before filtering muddy water, a little water will precipitate much of the suspended matter, and so will other substances less convenient in traveling. On country excursions there is no preparation like a bottle of cold, unsweetened tea, just bitter enough to prevent a mouthful being swallowed after the thirst is quenched. I have found an average of one pint a day sufficient for long rides in the sun in summer. Thus with a little care, the subtle excuse of bad water is disposed of, an excuse which does much more evil than we hear of in England. I am convinced that more travelers suffer from eating too much meat and that too fast, than from the water, and from inattention to the regular performance of digestion, which is an invaluable index. My own custom is to eat in every land the local food with such exceptions as pigs, carnivorous things, putrid (not rare) meat and shellfish; and I have been duly thankful in every clime for the best of health and good sleep."

Health Report.—The following reports of mortality from smallpox, yellow fever and cholera have been received in the office of the Supervising Surgeon-General U. S. Marine-Hospital Service:

SMALLPOX—FOREIGN.

Antofogasta, Chile: July 24 to 31, 1 case, 1 death.
Bombay, India: August 4 to 11, 4 deaths.
Callao, Peru: August 2 to 16, 24 deaths.
Gibraltar: August 16 to 23, 2 cases.
Licata, Italy: August 15 to 22, 3 deaths.
Madras, India: August 1 to 7, 1 death.
Madrid, Spain: August 18 to 25, 33 deaths.
Montevideo, Uruguay: July 18 to 25, 3 cases, 1 death (varioloid).
Moscow, Russia: August 8 to 15, 3 cases, 1 death.
Naples, Italy: August 15 to 22, 9 cases, 5 deaths.
Odessa, Russia: August 15 to 22, 4 cases, 3 deaths.
Pernambuco, Brazil: July 18 to 25, 50 deaths; July 25 to August 1, 51 deaths.
Rio de Janeiro, Brazil: August 1 to 15, 33 cases, 4 deaths.
St. Petersburg, Russia: August 15 to 22, 2 cases, 1 death.
Warsaw: August 15 to 22, 5 deaths.
Yokohama: July 17 to 31, 2 deaths.

CHOLERA.

Egypt: Cairo, August 4 to 10, 14 cases, 4 deaths; Alexandria, August 9 to 15, 22 cases, 21 deaths.

During the period from August 4 to August 15 there were 1,008 cases of cholera and 554 deaths from that disease reported from towns and districts in the interior of Egypt. From the beginning of the epidemic to August 14 the figures are: 17,453 cases, 14,498 deaths. In the Port of Alexandria to August 14 there have been 970 cases, 821 deaths.

India: Bombay, August 4 to 11, 21 deaths; Madras, August 1 to 7, 2 deaths; Calcutta, July 25 to August 1, 8 deaths.

YELLOW FEVER.

Brazil: Rio de Janeiro, Aug. 1 to 15, 7 deaths.

Cuba: Cienfuegos, Aug. 23 to 30, 6 deaths; Cardenas, Aug. 16 to 29, 65 cases, 22 deaths; Havana, Aug. 27 to Sept. 3, 100 cases (?), 60 deaths; Matanzas, Aug. 26 to Sept. 2, 31 deaths; Santiago, Aug. 22 to 29, 14 deaths; Sagua la Grande, Aug. 15 to 29, 145 cases, 24 deaths.

BOOK NOTICES.

Transactions of the Medical Society of the State of California. Session of 1896. A. P. WOODARD, Chairman, W. W. KERR, A. H. TAYLOR, J. M. WILLIAMSON, M. H. WOOLSEY, Committee on Publication. W. A. Woodard & Co., San Francisco, Printers. 359 pp. Cloth.

W. G. Cochran delivered the address of welcome, which was responded to in a happy manner by R. Beverly Cole, M.D., Ex-President of the AMERICAN MEDICAL ASSOCIATION. President W. Le Moyne Wills, M.D., in his address, ably discusses the subject of medical progress, etc. He calls attention to the subject of transportation of tuberculous patients and says it is time the different States should give it attention, and if the railroad companies will not discriminate and protect healthy passengers, the States, through their medical officers and the profession, must protect themselves and those entrusted to their charge. The book contains, in addition to reports of committees, lists of members, etc., some thirty-eight interesting papers.

A Manual of Clinical Diagnosis by Microscopical and Chemical Methods. For Students, Hospital Physicians and Practitioners. By CHARLES E. SIMON, M.D., Late Assistant Resident Physician Johns Hopkins Hospital, Baltimore. In one very handsome octavo volume of 504 pages, with 132 engravings and 10 full-page colored plates. Cloth, $3.50. Lea Brothers & Co., Philadelphia and New York. 1896.

The special feature of this work on diagnosis is indicated in its title, namely, the application of chemistry, and it is a fact, beyond controversy, that the great preëminence of certain European classes is due to the greater attention paid to chemistry, physiology, bacteriology and diagnosis. The author says: "It is curious to note that, notwithstanding the great importance of clinic chemistry and microscopy, but little attention is paid to these subjects, either by hospital physicians or by those engaged in general practice. This lack of interest is referable primarily to the fact that systematic study of these branches has heretofore been greatly neglected, not only in American medical schools, but also in those of Europe."

The laboratory method of diagnosis, when taken in connection with the well-known physical signs, makes the practice of medicine truly a science, and we can not have too many books of this character.

The directions for examination of the various fluids of the body and the excreta are so clear and explicit, that it does not require an expert to follow out the tests as laid down in the book. The work is well illustrated, and some of the illustrations, being in colors, are beautiful.

A Manual of Venereal Diseases. By JAMES R. HAYDEN, M.D., Chief of Venereal Clinic, College of Physicians and Surgeons, New York; Professor of Genito-urinary and Venereal Diseases in the Medical Department of the University of Vermont, etc. In one 12mo volume of 263 pages, with 47 engravings. Cloth, $1.50. Lea Brothers & Co., Publishers, Philadelphia and New York. 1896.

In this little manual students and practitioners will find a practical dissertation on the three venereal diseases—gonorrhea, soft chancre and syphilis, with their complications and sequelæ. The general line of treatment and the formulæ given are those advocated by Prof. R. W. Taylor of New York, in his clinic. The discussion of the history and statistics of these diseases, which usually takes up a large portion of a volume, has been omitted from this manual. The illustrations are fair; the mechanical execution of the work is all that could be desired. We notice, however, that the Otis instrument figured on page 103 is an old pattern, and not the instrument having a tunneled extremity for the passage of the guide, which is that we believe most recently used and figured in the volume of Park previously noticed. For examination purposes, and those preparing for examination, the manual will be found very useful.

Jackson's Ready-Reference Handbook of Skin Diseases. The Ready-Reference Handbook of Diseases of the Skin. By GEORGE THOMAS JACKSON, M.D., Professor of Dermatology, Woman's Medical College of the New York Infirmary and in the University of Vermont, Chief of Clinic and Instructor in Dermatology, College of Physicians and Surgeons, New York. New (2d) edition. In one 12mo, volume of 589 pages, with 69 illustrations and a colored plate. Cloth, $2.75. Philadelphia, Lea Brothers & Co., 1896.

In this the second edition of this work the author has added considerably both to the text and illustrations.

The greatest defect is that it gives too much space to the recipe, and too little to pathology and etiology. Practical physicians who form their opinions upon the analysis of the symptoms and history of a case rather than its disease label will regret this. The work however is a useful one and this edition will doubtless have a great sale.

MISCELLANY.

Dr. Charles A. L. Reed has been elected gynecologist and abdominal surgeon on the staff of the Cincinnati Hospital, vice Dr. T. A. Reamy, resigned.

Illinois Medical College Commencement.—The second annual commencement exercises of the Illinois Medical College, Chicago, were held September 10. A class of ten, three of whom were women, received the degree of Doctor of Medicine. The Bishop prize for the highest grade in clinic surgery was won by William F. Sterman.

A New Cycle Ambulance has been invented by Dr. Honig of Berlin. It is not drawn by horses or men in the ordinary way, but is propelled by cyclists, and consists of a kind of litter resting on a frame with five wheels, three in front in the form of an ordinary tricycle, and two at the back.—*Albany Med. Annals*, September.

Homage to Pasteur.—An interesting feature of the recent International Congress of Applied Chemistry at Paris, was when the members repaired to the Cathedral of Notre Dame and defiled past the chapel where Pasteur's remains are lying, leaving there a magnificent wreath of cut flowers, with an appropriate inscription. They went from there to the Institut Pasteur, where they witnessed several antirabic injections, and closed the day by visiting the stables where the immunized horses are kept.

Connection between Rachitis and Humidity.—A study of rachitis or English disease, as it is called, is published in *Wratsch*, No. 17, which asserts that it is a physiologic condition in localities with a relative annual humidity of 80 per cent., while it never appears where the annual humidity is 8 per cent., except under exceptionally favorable circumstance for its evolution, and is unknown in localities with less humidity than this.—*St. Petersb. Méd. Woch.*, No. 7.

Post-Graduate Medical School of Chicago.—The Post-Graduate Medical School of Chicago moved into its new building and new location at 2400 Dearborn Street, Sept. 1, 1896. The new building is an ornate structure, seven stories in height, constructed as a clinic school and a clinic hospital. The school is complete having the most modern lecture rooms and laboratories. The hospital has accommodations for 100 beds. One floor is artistically furnished for private patients. There are four operating rooms of the most modern construction, including an amphitheater operating room, which will accommodate 300 students. The building is lighted with electricity and is provided with elevators. The location is selected because of its superior clinic advantages. Within a distance of ten minutes' ride from the school proper are the St. Luke's, Charity, Michael Reese, Mercy, Woman's and Wesley Hospitals. Clinical instruction will begin in the new quarters at once.

Criminality of Hygienists.—A witty article in the *Revue Médicale de Paris* laments the growing scarcity of the sick and the increasing numbers of physicians. It denounces Jenner, Pasteur, etc., as guilty of depriving their colleagues of their daily bread and wrecking the profession. Especially is this the case in the cities where prophylactic and hygienic measures are most strictly enforced and the sick number less in proportion. It adds a few figures in confirmation from the death records of Paris during the last ten years, stating that the figures to date for 1896 show even more marked reduction:

Deaths caused by	1885 to 1890.	1890 to 1895.
Smallpox	1,271	656
Scarlet fever	1,225	946
Measles	6,671	5,192
Diphtheria	8,383	7,588
Typhoid fever	5,904	3,493

Vaginal Hysterectomy.—In cases where hysterectomy must be an operation of election there may be conditions that will require the vagino-abdominal or the suprapubic method. The following are some of the reasons why vaginal hysterectomy should be preferred to celiotomy: 1. There is less shock and more rapid and complete convalescence. 2. In pelvic suppuration there is less danger of septic infection from soiling the peritoneum. 3. Absence of suture or mural abscesses, and of sinuses following the use of drainage or an infected ligature. 4. Immunity from ventral hernia. 5. A lower mortality, fewer post-operative complications, and a more complete restoration to health in a relatively greater number of cases. The above are facts, as shown by the statistics of the most successful operators in celiotomy and vaginal hysterectomy; and in vaginal hysterectomy many of the cases were inoperable by any other method.—Dr. William H. Mathew, in *Am. Jour. Obst.*, September.

Defective Breasts a Sign of Degeneracy.—Hegar appeals to young men on behalf of posterity to select women with well developed breasts for their wives, and suggests that the young women can retaliate by refusing to marry a man unless he can produce a record of having been a "breast baby." He quotes statistics to prove that inability to nurse a child is a sign of degeneracy, and produces degeneracy. We note among the facts he cites that in a certain district which supplies large numbers of wet nurses to the city, the percentage of men physically incapable of military service amounts to 30 per cent., while in the neighboring districts where the mothers remain at home with their families, it is only 18 per cent. He also remarks upon the surprising numbers of deformed nipples encountered in the hospitals. Fehling mentions "hollow nipples" as occurring in 6.7 per cent. of his obstetric cases. Hegar warns mothers not to allow the clothing to constrict the growing breasts of their

daughters, and urges general hygiene as the best method to develop them.—*Deutsch. Med. Woch.*, August 20.

Influence of Sugar on the Energy of the Muscles.—Schumburg states that he has been experimenting with Mosso's ergograph to determine whether sugar increased the muscular power as some assert, or whether the increase in energy observed is due to psychic influences. He found that the sugar produced no perceptible effect on fresh, unfatigued muscles, but that muscles fatigued from previous severe exertion were strengthened to a noticeable degree. This effect was attained whether the muscles were strong or weak.—*Deutsch. Med. Woch.*, August 20.

The Pan-American Congress.—The committee in charge suggests to the home members climatology and a study of yellow fever and its disappearance as the altitude increases, as special subjects in which home talent might render great service to science. Also the study of leprosy and of the endemic "pinta." Typhoid fever and malarial disorders are also of universal interest, and the physician of Mexico has especial opportunity to observe them under varying conditions of climate, etc. Another subject for which he is especially qualified is the changes undergone by the organism in adapting itself to varying altitudes. The Mexican surgeon is also peculiarly an authority on the wounds produced by "cold steel." It also sensibly advises the home members not to expatiate on the deficiencies, but to reserve such facts for the national gatherings, and in the international congress, to dwell rather on what has been accomplished in their country.

Treatment of Chlorosis with Ovarian Extracts.—Spillman and Etienne have treated six cases of chlorosis with ovarian extracts with satisfactory results. They say of the ovary that it is a gland with an external secretion, the ovum; that it is also a gland which eliminates by means of the menstrual flow the excess of organic toxins, while at the same time it is a gland with an internal secretion, like the testicles, and this internal secretion plays an important part in the general nutrition. When the ovaries are diseased, these three functions of the gland are modified or abolished, and with the suppression of the menses appears that special intoxication, chlorosis. This general morbid condition prevents in turn the restoration of the ovaries to normal conditions. Administering ovarian tissue or extract favors the elimination of the toxins and introduces into the organism an antitoxic principle which seems to exert a beneficial effect on the general health, to increase the number of corpuscles and cause the reappearance of the menses. They administered fresh ovarian tissue from lambs, or the same desiccated, and also extracts prepared by the Brown-Séquard-d'Arsonval method. Mairet added to their communication to the French Medical Congress, that his experience confirms their statements and also the fact that the injection of blood and the products of other glands, notably of the testicles, improves the general nutrition. Teissier remarked in regard to the injection of renal extracts, that they attenuate accidents of renal origin by augmenting the elimination of poisons through the urine.—*Bul. Méd.*, August 26.

Creation of Universities in France.—There are no universities in France at present as we understand the term, but recent legislation to take effect in 1898 unites the separate "corps de facultés" which now have charge of higher learning into organized combined institutions similar to those in other countries. Fifteen cities have "corps de facultés," and half of them have all four departments, medicine, law, science and philosophy, but these departments have been heretofore separate entities, with no interests in common, their expenses paid by the government and the receipts from students paid to the government. The new law merges these separate faculties into universities, which are to retain a certain proportion of the fees from students, with other privileges depending upon the number of students they attract. It is evidently an attempt to foster a spirit of emulation and catholicity of culture. A letter to the *Deutsch. med. Woch.* commenting on the new order of things, mentions the strictly obligatory nature of the French courses; three absences from a course without an excuse and one's name is dropped from the list and one loses the trimester. There is no such thing as academic option in France except in regard to the conventionalities and police regulations. It adds that there is more license allowed in Paris, at least, in these respects than anywhere else in the world probably.

Pathologic Study of the Kidneys.—Mircoli describes in the *Gaz. degli Osp. e delle Clin.* of August 23, a series of experiments on rabbits to investigate the beginnings and course of renal lesions, as such lesions usually come under observation in the clinics only in the latest stages. He found that one diseased kidney was apt to infect the other, also that lesions of the connective tissue and of the epithelium and albuminuria have a characteristic tendency to become aggravated and progressively chronic. The albuminuria in interstitial nephritis is the exponent of the various stages of the development of the morbid condition, rather than of the intensity or extension of the process; its disappearance may therefore coincide with the maximum of the lesions in the connective tissue. He also established the fact that a localized lesion tends to extend along the route of the connective tissue, and ultimately to affect all the viscera, with a diffuse alteration.

Fat as a Factor in the Production of Hernia.—Tillaux and Champonnière assert that the original cause of almost all hernias, congenital inguinal hernia excepted, is an exaggerated development of adipose tissue, or the other extreme, emaciation. The tendency to obesity should be combated on this account with gentle gymnastics, especially balancing, and the frequent use of mild purgatives to keep the intestines empty, with suitable diet, little meat, no alcohol in any form, and other means to keep the functions of the skin and kidneys active, hot dry or steam baths, mineral waters, &c. Elderly persons should seek gentle exercise, avoid effort in defecation and coughing, and also not lie too much in bed nor sleep too long. It is often best to precede an operation with antifat treatment of this kind. In certain cases of distressing hernia, surprising relief is sometimes obtained by reducing the obesity.—*Bulletin de l'Académie de M.*, August 25.

Reinfection of Syphilis.—The recent specialist Congress at London and also the French Congress of Internal Medicine, devoted considerable time and discussion to this question. Cases were described in each that seemed to prove conclusively the fact of recovery from the first attack and reinfection later. But the French and some others still cling to the theory that once a syphilitic, always a syphilitic, or as the English specialist remarked: "The soul of a syphilitic will rise syphilitic at the Judgment Day." Fourrier in France and Ogilvie at London cited convincing cases of reinoculation, but the latter protested against confounding the question of reinfection with the question of curability, as reinfection may occur in the midst of tertiary symptoms, as he has had occasion to observe, while on the other hand, he thinks that even if there is no such thing as reinfection, still this does not prove the incurability of syphilis, as immunity is not synonymous with disease.

Applied Chemistry.—The recent International Congress decided that the word "extractive" should be henceforth dropped as vague and unnecessary. The term "azoturic proportion" will also supersede the term "coefficient of azotic oxydations" in the analysis of urines, to express the proportion of azote in the urea to the total amount of azote in the urine. In determining the amount of uric acid, the Salkowski-Ludwig method is to be used where extreme accuracy is desirable, but the Denigès' method is sufficient for all practical

purposes. In testing physiologic and pathologic liquids, they are no longer to be measured by bulk, but by weight, with a standard quantity in a standard platinum capsule, for a standard length of time and under standard conditions of temperature. This system is already followed in analyzing sugars, wines and foods. The standard of acidity is to be the number of cubic centimeters in normal alkalin fluid. Gastric juice is to be the only exception to this. Its acidity will be estimated as hydrochloric acid, with phenolphthalin for the indicator. Further efforts were made to unify the Codex, and the congress officially resolved to appoint a committee in each country to establish the standard of purity for each medicine, and the quantities of the active principles contained in it, with a statement of the methods of dosage and the corresponding proportions in foreign pharmacopeias—this official analytic supplement to be included in each Codex.—From the *Bulletin de l'Acad. de M.*, August 11.

"Wisconsin Eclectic Medical College of Milwaukee," Wis.—We have received of Dr. C. R. Gay of Windsor, Vt., a letter which encloses various circulars of the Wisconsin Eclectic Medical College. It seems that the Medical and Surgical Directory wrote Dr. Gay, and receiving no reply, placed a star opposite his name; whereupon the diploma mill people write a letter to Dr. Gay, which runs about as follows:

"We notice your name in a Surgical Directory, but with a star appended, to which a foot note reads: 'No report received in answer to inquiry regarding graduation.' It by no means intends to convey the idea that the person so designated is not a graduate; yet naturally in such a case the presumption is fair that this is so. If, however, it should be that you are a graduate and have a regular diploma, then we can but tender our most sincere apologies for troubling you in the matter. But, on the other hand, if you are not a graduate and have no regular diploma, then the perusal of the enclosed prospectus can not fail to be of the most primary importance and interest to you. We would also desire to draw attention to the fact that to practicing physicians our fees are much reduced from the regular rate. To this class our fees are $35 all inclusive. As proof of our legal standing and right to confer the degree of M.D. we can supply certified copies of our charter at 25 cents each, simply covering the cost of certifying officer's fee. Trusting soon to hear from you and standing ready to answer any or all questions you may wish to submit, we are

"Yours very sincerely.

"Wisconsin Eclectic Medical College."

They also inclosed in this letter a reduced cut of their diploma, the original of which, according to the veracious circular, is 18x23. This reduced cut bears the names of Fred Rutland, Ph.D., M.D.; Charles Podmore, M.D.; Rosa Dempster, M.D.; Jules Gordon, M.D., Prof. Anatomy; William Newton, M.D.; Horatio Myers, M.D. We also infer from certain insignia on the bottom of this valuable document that there are five ribbons attached thereto, of the colors respectively, black, red, white, blue and old gold. This seems to us most brazen effrontery. The papers in the case have been forwarded by us to the Attorney-General of the State of Wisconsin.

Solidified Casein Casts and Improved Bandages.—Soloview states that fresh caseum mixed with one-eighth its weight of liquid ammonia, makes a gluey mass that is especially adapted for casts, on account of its lightness and cheapness, while it answers every purpose. It has to be made on a cast first taken of the part and removed with a longitudinal section. The caseum cast is then made on this with first a layer of felt, held in place with a piece of flannel, then the drilling soaked in the caseum glue is wound around it twice, with a layer of fine shavings between each layer. An outer layer of the caseum drilling completes the cast, which is then placed in the oven to dry until next day, when it is ready to be applied to the patient. A caseum corset retains its shape on a child for four months, but it is apt to crease on an adult in time unless it is strengthened by a few splints or bones. (*Semaine Méd.*, August 26.) Thilo of Riga, also writes to the *St. Petersb. Med. Woch.* August 15, that he derives great advantage from a piece of white felt laid over the ankle or knee, in applying a compressing bandage for sprains, etc. It enables the bandage to be drawn much tighter than usual, without injury to the wounded joint. He slits the felt or makes an oval opening over the most sensitive part, and thus the pressure on top of this elastic protector can be indefinitely increased. The patient can even resume his ordinary occupations with a bandage of this kind, and the best results follow its use.

Prevention of Suppuration in Acute Pelvic Inflammations.—Wm. R. Pryor, M.D., says: The observation and experience of six years with conservative curettage have taught me to surely expect a complete recovery in cases of acute endometritis with salpingitis and peritonitis when seen early in first attack. For two years, in all such cases, I have operated as follows: The uterus is thoroughly curetted and irrigated. All instruments being changed, in a few minutes the cul-de-sac is opened and a wide blunt dissection made in the vagina and cul-de-sac by separating two fingers. The fimbriated ends of the tubes are opened if found closed. All serous-fluid accumulations are evacuated, and the pelvis wiped dry. No irrigation is here used. I then pack from three to five yards of iodoform gauze into the pelvis, each strip being about three inches wide. The uterus is next tightly packed as is also the vagina. A self-retaining catheter is introduced. On the third day the vaginal gauze is removed together with that in the uterus. The vaginal gauze is renewed, but the uterine packing is not, unless the uterus be large. The gauze in the pelvis is removed in a week or ten days under chloroform and another large pelvic packing is made. The results of this operation are most gratifying. The lymph which is thrown about the antiseptic dressing disappears in a few months and the uterus becomes perfectly movable. Accidents have never happened and I have been uniformly successful in preventing suppuration. In several cases of relapsing salpingitis I have met with large hydrosalpinx and broad ligament cysts. These were merely incised and evacuated.—*Med. News*, September 5.

Amendment of South Carolina Law as to Commitment of Insane.—The South Carolina enactment approved Dec. 24, 1894, to further regulate and provide for the admission and discharge of patients to the lunatic asylum and promote the management of the same, was amended by an act approved in March, 1896, by adding the following proviso to the end of section 5 thereof: That the superintendent of the Lunatic Asylum, now known as the State Hospital for the Insane, shall receive into his custody and detain in said hospital for a period not exceeding five days, without an order from the judge of probate, any person as insane whose case is duly certified to be of violent and dangerous insanity and emergency by two reputable physicians, which certificates shall be separately signed and shall conform to all the requirements as now provided by law. In addition to such certificates, an application, signed by a trial justice, mayor or alderman, intendant or warden of the county, city or town in which such insane person resides or is found, shall be left with the superintendent of said state hospital for the insane, and said application shall contain the answers to the list of interrogatories now in use by the regents of said hospital; provided, further that when such insane person is committed and received in said hospital for the insane, the party committing such person shall give a bond in the sum of one hundred dollars to the treasurer of said institution, with condition that he or she will within five days procure an order for the commitment of said patient as now provided for by law, and failing therein said insane person shall be removed or discharged by the superintendent of said institution and suit brought by him (if he sees proper to do so) on said bond for the cost of maintenance of said person while confined. For the duties required of the judge of probate, under the provisions of this act, he is,

by further amendment, allowed the sum of five dollars. And the following fees and charges, it is further enacted, shall be paid for the conveying of insane persons to the hospital; to the officer or person conveying said insane party, $2 per day and 12 cents per mile one way, and out of which said mileage herein allowed shall be paid all the costs and expenses of said insane person. If it shall be necessary to employ a guard to assist in conveying such insane person, such guard shall receive one dollar per day and his actual railroad fare. Said charges shall be paid out of the county treasury on order of the supervisor.

Some Unrecorded Symptoms of Tetanus.—De Brun writes from Syria to the Académie de Med. that tetanus is often encountered there, and is not infrequently produced by the use of cautery, which is quite a popular remedy. He has had seventeen cases under observation and records certain symptoms which are not noted by the authorities. One is the obstinate constipation, resisting purgatives and enemas, and returning after each laboriously secured evacuation. Another is the ravenous appetite in sub-acute or chronic cases. Thirst is torturing in all, and often the only service that can be rendered the sufferer is to keep the parched lips and mouth constantly moistened. Other symptoms are the tenacious and sometimes absolute insomnia, and the frequent and violent sweats, which persist at irregular intervals even after recovery in some cases, so severe that the patient has to return to bed. But they have no critical significance, and do not attenuate any of the symptoms. There is also an invariable and intense desire to keep changing the position. He mentions three cases in which the tetanus had shortened certain muscles, producing a strange inability to sit or lie down directly, to step on the heels, to open the mouth wide, etc. He describes at length one case of this kind, following cauterization of the shoulder for a contusion, the wound dressed afterward with chick-peas. It was three months and a half before the shortened muscles were brought to approximate normal length. His treatment was chloral, 10 to 14 grams a day, in fractional doses, 3 to 5 grams of antipyrin, and for one fortnight, 2 to 4 hypodermic injections of ½ milligram of sulphate of atropin, with exercise of the muscles the last six weeks. Teissier refers in half a dozen words to this shortening of the muscles: "Occasionally certain contractions persist a long while."

Expert Evidence as to Cause in Malpractice Case.—The question: "Is it legally competent, in order to show malpractice, for a surgical expert, with the results of a surgical operation performed nearly two years prior before him, either through his own personal examination and investigation of that result, or through a hypothetic question placing the results before him, to give an opinion as to the cause or causes that produced the results?" was presented by the case of Tullis v. Rankin. The trial court held that it was not. But the supreme court of North Dakota reaches the opposite conclusion, as stated in the opinion handed down July 2, 1896, while admitting that the question is close, and that authorities can be found that give support to the ruling of the trial court. It is doubly important to note the facts, as it is said that each case heretofore involving the question seems to have been ruled to some extent by its own attendant circumstances. In this case, the plaintiff had his foot run over and crushed by the cars on May 5, 1893. On that same day his leg was amputated by the defendant, and he was sent to a hospital where he remained about two months. The wound never entirely healed, and the pain never left it, until after a second amputation was performed by three other surgeons, in March, 1895, when the limb healed, and all pain ceased. These gentlemen were severally sworn as expert witnesses for the plaintiff. They testified in detail as to the condition of the limb and the patient at the time of the second amputation. After having so testified, each was asked: "What, in your opinion, was the cause of the condition in which you found the limb at the time you made the examination and amputation?" And to one of them, a hypothetic question was put incorporating the facts to which the plaintiff had testified as to his injury. Conceding that the ultimate object was to show that an improper or unskillful amputation was the cause of the condition, the supreme court still holds that the questions as asked should have been answered, and on that ground reverses a judgment which had been given the defendant, ordering a new trial. The opinions, if given as anticipated, it says would have concluded nothing. They would have gone to the jury for what they were worth. It was still open to the defendant to show that the original amputation was skillfully and properly performed; still open to him to show that other circumstances and events influenced or produced the results; still open to him to show by other expert testimony, if he could, that the opinions of the plaintiff's experts were unwarranted in scientific surgery. Courts as a rule, it is also said in this case, entertain an aversion to expert testimony, particularly medical and surgical expert testimony, and that experience no doubt warrants the aversion; but it is not to be excluded on account of the embarrassment its weight or lack of weight may cause a jury.

New Light on the Pathologic Processes in Cholera.—Federn makes the surprising announcement in the *Wien. Med. Presse*, No. 25 that he finds with the sphygmomanometer that the pressure of the blood is increased in cholera, instead of being lowered, as is stated by all the authorities from Griesinger to Leyden. This increased pressure can not be due to any stronger action of the heart, but rather to increased resistance in the vascular system, commencing in the splanchnicus region and probably spreading thence to the entire system. This throws a new light on the nature and course of the choleraic processes. Two factors must unite to produce this elevated pressure; the thickening of the blood from transudation, and increased resistance in the vascular system. When this resistance is great a slight transudation is enough to produce cardiac failure, and when both factors are acting powerfully the course is rapid. These facts show that the old methods of treating cholera were faulty in two respects: First, in considering the transudation in the intestines as of less importance than stimulating the action of the heart, at the beginning of the asphyctic stage, when the diarrhea grows less or ceases entirely, although the necropsies show that the transudation persists. This error can be remedied by tannin enterocleisis. The second error was in directing all the efforts toward stimulating the action of the heart, as it was never suspected that the pressure of the blood had been elevated by increased resistance in the vascular system. The results of Federn's observations will be that henceforth the effort will be to resist this tendency in the vascular system, and it may even be possible to prevent the asphyctic stage altogether. The problem of how to respond to these indications is still unsolved, as it has scarcely yet confronted practical medicine, except in the case of angina pectoris. But reasoning from analogy, Federn advocates the general use of calomel from the start, instead of beginning with astringents and opium, as, in most cases, increased blood pressure proceeding from the intestines is the result of irritation of the splanchnicus usually produced by constipation. Federn has also observed an elevated blood pressure reduced by natrium salicyl. in large doses, four to six grams, antipyrin, phenacetin, salipyrin in doses up to two grams, morphin, codein and chloral hydrate; but the most powerful effect is obtained by chloroform narcosis. Cramps of the capillaries are an important factor in the fatal termination of cholera, and thus the use of chloroform, our most powerful remedy for cramps of all kinds, is already indicated. He also suggests faradization of the intestines, which is sure to lower the pressure resulting from partial atony, but queries whether it is practicable in cholera, on account of the tendency to muscular cramps, even in the bowels.—*Therapeut. Woch.*, August 9.

Cerebral Localization.—President Pitre's address on this subject at the French Medical Congress last month, forms an interesting supplement to the editorial in this JOURNAL July 18, page 161. After a historic sketch and a description of the neuron, he referred to the two groups of cells which histologic investigation reveals in the cerebral cortex: the pyramidal cells, with their long axis cylinders, passing through the internal capsule into the subjacent bulbo-medullary centers, and the second group of cells, smaller and of various shapes, which are entirely contained in the gray cortical matter in a network of associated cells. Histologic anatomy reveals absolutely nothing in regard to the functions of the latter. But we have learned to know them by clinic observation, thanks to the arrangement of the elongated neuron processes in the internal capsule. Any injury to the internal capsule is liable to affect these elongated processes located in it, while not affecting at all the smaller associated cells which do not extend into it. He quoted various writers who have established from clinic experience that injury to the capsule and its cell processes produces motor and sensory disturbances, but never psychic. The intellect, the memory, the will, etc., are never affected by injury of the internal capsule alone. The psychic functions reside in the innumerable associated neurons, the second group of cells referred to above, whose branching terminals ramify all through the gray matter of the convolutions in every direction. These neurons not having any capsular process, and not being grouped in anatomically isolated islands, are not accessible to our methods of investigation. They even escape anatomo-clinic study, owing to that indeterminable extension and far-reaching influence of any lesion of the cortex, even the most limited. Everything tends to prove that the functions we attribute to them are not localizable. It is certainly a vain quest to seek for the seat of the memory, the intelligence, the will. These words represent entities in scholastic language, but in fact, they are only abstract terms, which mislead us into a false conception of the complex phenomena they represent. The intelligence is in physiology, something analogous to what we mean in economics by the State. This word State is also a substitute which represents by an abstract term, an infinitely complex reality, an organized power which acts through a multitude of agents, subordinate one to the other, and distributed throughout the entire territory in such a way that it would be necessary to suppress the entire army of officials of all kinds, in order to destroy at one blow the administrative, judicial, military, collegiate and religious mechanisms which combined, constitute the State. The mind is "fragmented" in the same way. Each cerebral cell contains a part of it. None is its exclusive organ. We have no grounds at present to suppose that there is anywhere, a conscience center, a judgment center, an intellect center, etc. According to the present status of our actual knowledge, we must consider the gray matter of the convolutions as the essential organ of psychic elaborations. They operate in the network formed by the terminal ramifications of the polymorphous cells of the cortex. This extremely complicated network in which, so far, we have been unable to establish any precise localizations, is connected with the periphery by the system of pyramidal cells with the long processes, whose functions are to receive, to record and to preserve the sensory images which form the first material for the mental operation, and the motor images which are the final product. Those which serve for the sensory impressions are distributed through the spheno-occipital lobes; those which serve for the motor impressions, through the fronto-parietal lobes. This explains why lesions of the anterior lobes of the brain are not so important physiologically as lesions of the posterior lobes. The former produce disturbances in the sensory images perceived, but the latter prevent the formation of motor impressions and the transmission of will-impulses. This is the explanation, unless I am mistaken, of the structural identity of the convolutions shown by the histologists, and of their functional diversity, which has been established again and again by thousands of exact, incontrovertible facts accumulated by investigators and clinicians of all schools and in all lands.

Physician Commended Under Unusual Circumstances.—The London *Lancet*, August 8, tells the following pitiful story of a woman's death and a physician's trying situation. It so happens that the good acts of the medical man were recognized—but what might not have been the jeopardy of his whole professional life, if some one or more had found it to his or their interest to lie about him. As the *Lancet* well says, the situation fairly "teems with difficulties," and dangers as well. The story is this: "An inquest was recently held at Chelsea touching the death of Miss F. T. Handford, who died aged 34 years after having miscarried. On June 25, 1896, she consulted Dr C. J. Harrison, who prescribed for her for anemia. She then said, 'If I tell you a secret will you keep it?' and upon Dr. Harrison replying in the affirmative she mentioned that she was pregnant. July 8, she went again and suggested that Dr. Harrison should procure abortion for her. This he absolutely refused to do and dissuaded her as strongly as possible. On a subsequent occasion she repeated her request with the additional inducement of a blank check. Dr. Harrison again refused, and July 22 Miss Handford arrived at his house looking very ill and fainted in the consulting room. As she was obviously very ill and had profuse hemorrhage Dr. Harrison allowed her to remain in his own house and communicated with her friends. The cousin of the deceased arrived, and later in the evening the patient asked the nurse in attendance to write a statement for her, in which she said that Dr. Harrison had refused to bring on a miscarriage, so 'this morning feeling desperate I went to a doctor in —— town, his name I refuse to mention, and he did something to me and told me that I should be all right, and as I walked toward home I turned faint and decided to go in and see Dr. Harrison before going home, and he allowed me to lie down; but I grew worse and fainted, and it was decided that I should stay here all night.' On the day following the deceased had a miscarriage, but went on well up to Friday, July 24, when the temperature went up. Dr. Herbert Spencer and Dr. Bradford saw her and considered her fit to be moved to Cheyne-walk, where she died upon July 27. Mr. A. J. Pepper, who made the postmortem examination, said that the deceased had nephritis. The uterus was healthy, but abortion had recently taken place. The cause of death was uremia from nephritis aggravated by the abortion. At the adjourned inquest on Wednesday, August 5, a verdict of 'Wilful murder against some person or persons unknown' was returned, and the jury adding: 'We wish to take some appreciative notice of the unselfish and Christian humanity of Dr. Harrison.' This is a very sad and very familiar story. We believe we are right in saying that the procuring of abortion otherwise than for reasons which can be medically justified is banned by the civil and ecclesiastical law of every civilized country, and as constructive murder it is right it should be so. But the whole question teems with difficulty. It certainly appears unjust, and very possibly is actually so, that a woman who, driven and harassed by shame and fear resorts to the questionable remedy of abortion should be liable to severe punishment, while the man who is equally responsible for the child goes free. Of course he is not responsible for the criminal act of the woman; but he is morally responsible in so far as he shared in bringing about the condition which made her resort to crime, and morally he is guilty although we fail to see how he can be made legally accountable."

Atlanta.

SOUTHERN MEDICAL COLLEGE.—Several changes have been made in the faculty of the Southern Medical College. Dr. Henry F. Harris, the former professor of chemistry and clinic

medicine, has resigned to accept the appointment of associate professor of bacteriology in the Jefferson Medical College of Philadelphia. Dr. Harris is one of the South's most able and energetic workers, and his researches in the field of amebic dysentery gives him prominence in this country. He has given much time to the study of this semi-tropical diarrhea, and will in a short time publish an interesting illustrated article on this subject. Dr. Ashby M. Purse of this city, has been appointed to succeed Dr. Harris as professor of chemistry in the Southern Medical College. He will fill the chair of chemistry with judgment and ability. Dr. G. G. Roy has been succeeded by Dr. C. D. Hurt of this city as professor of materia medica and therapeutics; Dr. Roy will remain with the college as an emeritus professor. Dr. Nicolson, the dean of this institution on the death of Dr. Powell, its founder, was made president by unanimous vote of the board of trustees. Dr. Nicolson's rank as a surgeon is well known. Dr. J. G. Bourns, late of Ann Arbor, has been elected professor of bacteriology, pathology and histology. Dr. Lucien Lofton of Atlanta, has been appointed assistant to the chair of anatomy, and assistant demonstrator of anatomy.

THE ATLANTA MEDICAL COLLEGE has made the following changes: Dr. H. P. Cooper will fill the chair of anatomy lately occupied by Dr. W. S. Armstrong, deceased. Dr. Hubbard of Atlanta, has been appointed assistant to the chair of materia medica.

INSOLATION.—A number of deaths have occurred in Atlanta and the immediate vicinity as result of heat stroke. Among the number, several children have succumbed. The immunity or resistance of the negro is noticeable. A fatal case of sunstroke among the colored men hardly ever occurs here.

GOVERNOR ATKINSON recently appointed Dr. J. B. S. Holmes to succeed Dr. Olmstead on the regular board of medical examiners of Georgia.

WHY is it that the Georgia State Board does not look after the herd of wandering quacks that infest the city and the State?

DR. I. B. DIAMOND, recently of the Johns Hopkins University, was last month elected to the position of pathologist to the Grady Hospital.

Cincinnati.

THE MORTALITY report for the week gives: Zymotic diseases 4; cancer 8; phthisis pulmonalis 11; other constitutional 3; local 40; developmental 12; violence 8; under 5 years 28; total 86; annual rate per 1,000, 12.77; corresponding week 1895, 124; 1894, 95.

THE ACADEMY of Medicine held its first meeting of the winter September 14. Dr. Albert Freiberg presented a paper on "Sub-phrenic Abscess following Appendicitis."

A MOVEMENT is on foot to organize a hospital for the care and treatment of the colored race in Cincinnati and vicinity. Dr. Frank W. Johnston is at the head of the monument.

DIPHTHERIA is spreading throughout the Mill Creek valley.

DR. JOSEPH EICHBERG, and Dr. S. E. Allen announce their removal to the "Lancaster" No. 22, W. 7th Street.

CHARLES COLLINS, a well known G. A. R. veteran has been appointed to succeed James Sherlock as supervisor of the Branch Hospital.

THE matter of the investigation of the Hygeia Medical College has at last been finally disposed of by the State Board of Medical Examiners, who have decided that the graduates from this institution will not be recognized as graduates and will have to pass the examination before the Board in order to be allowed to practice in the State.

THE ANNUAL REPORT of the Health officer, just issued, shows a balance on hand of $4,835.93 out of an appropriation of $44,393.23 set aside for the maintenance of the Health Department. The milk inspector made 2,755 visits to dairies and prosecuted 25 cases for violation of the milk laws, of which 21 resulted in a conviction; 100,103 cows were inspected and stock valued at $54,116 was condemned. The Health officer recommends the establishment of a central disinfection station for the thorough disinfection of all goods subjected to the influence of contagious diseases, public baths and the establishment of an isolation hospital.

THE CITY BOARD OF HEALTH of Mt. Sterling, Ohio, have ordered the public schools closed and all public gatherings stopped on account of the prevailing epidemic of diphtheria.

THE MEMBERS of the Hempstead Medical Association of Portsmouth have decided to prepare a black list of all persons who refuse or deliberately neglect to pay physicians' bills. The arrangement is to go into effect October 1, and medical treatment is to be refused to all persons whose names are on the list unless paid for in advance.

A CASE of fatal epistaxis occurred at Van Wert, Ohio, last week. The various methods for the checking of the hemorrhage were adopted but without avail.

Mississippi Valley Medical Association.—The officers elect are: President, T. Hunt Stuckey, Louisville; Vice-President, Chas. A. Wheaton, St. Paul; Second Vice-President, Paul Paquin, St. Louis; Secretary, Henry E. Tuley, Louisville. Place of next meeting, Louisville, Ky.

THE PUBLIC SERVICE.

Army Changes. Official List of changes in the stations and duties of officers serving in the Medical Department, U. S. Army, from Sept. 5 to Sept. 11, 1896.

The following named officers will report in person on Tuesday, Sept. 22, 1896, at 10 o'clock, A.M., to Colonel Charles H. Alden, Asst. Surg.-General, president of the examining board appointed to meet at the office of the Surgeon-General U. S. Army, for examination as to their fitness for promotion:

Captain William B. Davis, Assistant Surgeon.
Captain William W. Gray, Assistant Surgeon.
Captain Louis Brechemin, Assistant Surgeon.
Captain Louis A. La Garde, Assistant Surgeon.
Captain John M. Banister, Assistant Surgeon.
Captain Aaron H. Appel, Assistant Surgeon.

Captain La Garde is relieved from duty as Attending Surgeon and Examiner of Recruits at Boston, Mass., to take effect upon the completion of his examination, and ordered to Fort Robinson, Nebraska, for duty.

Change of Address.

Cobb, J. O., from Cincinnati, Ohio, to U. S. Marine Hospital, New York.
Dudley, Lewis W., from Chicago to Alma Sanitarium Co., Alma, Wis.
Eaton, Roy R., from Ithica to Lowell, Mich.
Ferguson, R. V., from Guthrie to Hodensville, Ky.
Ferguson, J. W., from Canaan to West Salem, Ohio.
McMillen, R. M., from Kingwood to 1321 Chapline St., Wheeling, W. Va.
Makuen, G. Hudson, from Cresson to 1419 Walnut St., Philadelphia, Pa.
Ross, Geo. M., from 3628 State St. to 1216 Masonic Temple, Chicago.
Wadsworth, Chas. C., has removed his office and residence to 1104 Van Ness Av., San Francisco, Cal.

LETTERS RECEIVED.

Alta Pharmal Co., St. Louis, Mo.; Ames, R. P. M., Springfield, Mass.
Bovee, J. Wesley, Washington, D. C.; Busey, S. C., Washington, D. C.; Bishop, S. S., Chicago.
Coone, Bathena, Peoria, Ill.; Christopher, Hiram, St. Joseph, Mo.
Damrell & Upham, Boston, Mass.; Didama, H. D., Syracuse, N. Y.; Dussan, A. Eustace, New York; De Schweinitz, G. E., Philadelphia, Pa.; Davidson, T. W., Oneida, Ill.
Elliott, A. R., New York.
Feiel, A., Columbus, Ohio.
Govie, E. T., Woodstock, Vt.
Humel, A. L., Advertising Agency, New York: Harrison, C. F., Perry, Ill.; Hunt, Mary H., Boston, Mass.: Henel, Emil, New York; Harmison, D. C., Bath, Ill.; Horner, Frederick, Marshall, Va.
Jenkins, J. F., Tecumseh, Mich.
Lautenbach, Louis J., Philadelphia, Pa.; Latta, Samuel W., Trenton, N. J.
Meany, Wm. B., St. Louis, Mo.; Murdoch, J. D., Pittsburg, Pa.; Massinger, C. J., Millville, N. J
Neal, J. H., Rochester, N. Y.
Quales, N. T., Chicago.
Schwab, L. W., Chicago; Straw, J. R., Ashland, Wis.; Shastid, Thos. H., Galesburg, Ill.; Sharpe, N. W., St. Louis, Mo.; Spalding, Warren C., New York; Shimonek, F., Milwaukee, Wis.; Schering & Glatz, New York; Spencer, John C. (2), San Francisco, Cal.
Tracy, J. L., Toledo, Ohio; Taylor, Geo. H. & Co., Chicago.
Von Koerber, P. E., Loup City, Neb.
Wilber, M. R., Neenah, Wis.; Widmeyer, J. N., Rolla, N. D.; Wolff, Arthur S., Brownsville, Texas.